



Clinical Medicine

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* Editorial *

Dr. Park Lewis

Sight Saver

THE practitioner of curative medicine (especially that branch known as surgery) is a much more romantic and spectacular figure, to his contemporaries, than he who devotes his life to the *prevention* of pain and disablement and the postponement of death, whose worth is generally recognized only after he has gone where such recognition will do him little good.

Of these latter benefactors to humanity was Dr. Francis Park Lewis, who was born in Hamilton, Ontario, Canada, May 19, 1855, and came to the United States, with his parents, while still a boy.

He received his Doctorate in Medicine from Pulte Medical College in Cincinnati (now known as the Cleveland-Pulte Medical College), in 1876, and deciding to devote his attention to diseases of the eye, immediately entered the New York Ophthalmic Hospital, from which he was graduated the following year, after which he undertook graduate studies in Berlin, London, and Vienna.

Returning to his home land, he entered upon the practice of his specialty in Buffalo, New York, where his ability was soon recognized, and where he resided until his passing, on September 10, 1940.

The importance and breadth of his work and reputation are suggested by the fact that he was consulting surgeon to the Millard Fillmore Hospital, Buffalo; the Buffalo State Hospital; and the Wettlaufer Eye, Ear, Nose, and Throat Clinic; and ophthalmologist to the New York Central Railroad. In addition, he was a fellow of the American Col-

lege of Surgeons; served as president of the Buffalo Academy of Medicine and as vice-president of the American Academy of Ophthalmology and Otolaryngology; and was a member of the American, French, and German Ophthalmological Societies, and of several other organizations. During the World War, he served as an ophthalmic examiner.

In 1902, Dr. Lewis was appointed by the governor of New York as chairman of a commission to study the causes of blindness, and also of a second similar commission, in 1905. This work resulted in the formation of the New York State Committee for the Prevention of Blindness, which developed, in 1908, into the National Society for the same purpose, of which he was the first vice-president, and in 1929, into the International Association for the Prevention of Blindness. He served as vice-president and an active member of the executive committees of both these organizations, from their founding until the time of his death; and in addition was president of the board of managers of the New York State School for the Blind, at Batavia. He was also chairman of the first committee on prevention of blindness of the American Medical Association.

Dr. Lewis was one of the editors of the *American Journal of Ophthalmology*, the author of a number of books and articles on the conservation of vision, and the translator into English of many similar works, from the German, French, Italian, and other languages.

In 1928, the St. Louis Society for the Blind awarded him the Leslie Dana Gold Medal, in recognition of his eminent achievements in the preservation of sight; and the International Association presented him with a special gold medal, on the tenth anniversary of its founding, in April, 1939. His home city, Buffalo, in 1933, awarded him the Chancellor's Medal, as a citizen deserving of special community recognition.

Of him, Leslie H. Carris, General Director of the National Society for the Prevention of Blindness, said: "No other man in America has done more toward eradication of the principal causes of blindness and toward the saving of sight than Dr. Park Lewis."

Surely the members of this profession should give him the remembrance and honor which he so fully and gloriously earned.

Great minds have purposes, others have wishes.
—WASHINGTON IRVING.

The Christmas Tree

CHRISTMAS, as a Christian festival, by no means goes back to the actual birth of Jesus. In fact, the exact date of the tremendous event is not at all accurately settled, being placed, by various ancient and modern students, on days anywhere from November 17 to April 20, with an especial leaning to January 6.

As a matter of fact, in earliest Christian days, there was a strong effort to avoid the winter solstice, which was so closely associated with the festivities, often orgiastic in character, with which the pagan world had, from time immemorial, welcomed the beginning of the northward journey of the sun god, which would culminate in the summer solstice, six months later.

The earliest authentic reference to December 25 as the actual birthday of Our Lord was made in 354 A.D. From that time on, however, especially in the western parts of the Roman Empire, that day came gradually into general acceptance in this connection. But it was not celebrated as a definite festival until several centuries later.

Most of our Christmas legends and customs are of Teutonic origin. In Britain, the 25th of December was a festival long before the conversion of the people to Christianity, and the preceding night was known by a word which meant "mother's night." As to what mothers, there seems to be no record.

Santa Claus is doubtless a version of San Nicolaas, a well-known saint of the early Dutch settlers in England—the protector of children and bestower of gifts upon the needy. The yule-log (left over from the midwinter feast of Odin), so long a part of Christmas celebrations in Europe (though never strongly entrenched in the United States), appears to have come from Lithuania. The giving of presents at this season can be traced to the yule gifts of Northern Europe; though the Christmas card is a modern invention (1846).

The Christmas tree came to us from Germany, where they call it the *Tannenbaum*; while the use of holly and mistletoe is a pagan survival, these having been sacred emblems in pre-Christian times.

Christmas Eve is the appointed time for erecting and trimming the Christmas tree and placing the holly and "greens." The tree is commonly left standing until "twelfth night" or Epiphany (January 6).

The trimming and lighting of a Christmas tree is a beautiful old custom which seems, even in this mechanistic age, to be gaining, rather than losing, ground. But, too often, the spirit of joyous participation in this ceremony, by young and old, is being lost, and the gorgeously tinsel-hung evergreen sapling is more rarely used as a bearer of kindly gifts, whose bestowal originated in the heart of the giver.

It would seem that something very valuable and sweet might be gained if families, instead of "making whoopee" on Christmas eve, would come together, if only for that one night, in their own homes, and happily unite in the erection and dressing of the *Tannenbaum*, with songs and laughter and good will and an occasional thought of the occasion of the celebration; for it makes no difference, in the effect upon us, whether the infant Jesus actually saw the world's light on that or another day.

We have few enough sentimentalities in these days, God wot, and it would do us nothing but good if we could get back to the simple, open-hearted kindness which used to characterize the Christmas season and forget, for a day or two, that we are hard-headed men and women of business or of those pleasures which are pursued so relentlessly that they become a task. Not by these latter routes will we arrive at

A MERRY CHRISTMAS.

If you have a contented mind, you have enough to enjoy life with.—PLAUTUS.

Two Bars on the Cross

THE double-barred cross is a striking symbol of the anti-tuberculosis crusade in this country, since the two main principles of tuberculosis control are as clearly defined as the two bars on the cross.

These two principles can be stated in a few words: First, find the person who has tuberculosis; second, prevent the spread of the disease to others.

Two such short statements are easy to make, but putting those statements into effect is not easy. We know what to do and we know how to do it, but actually doing it is the perpetual problem.

The first principle—find the person who has the disease—it is not a mere matter of watching for people who look sick. Tuberculosis is an insidious malady and hides behind apparently healthy looks for months, while doing its destructive work. Finally, of course, symptoms appear, and the victim is forced to seek medical help, but by that time the disease is entrenched in the body. *The time to find tuberculosis is before symptoms appear.*

Early tuberculosis can be cured, and the earlier it is found, the easier and quicker it is to cure. Advanced tuberculosis is difficult to cure and requires expensive years of inactivity and treatment. The x-rays will disclose tuberculosis while it is still curable.

The second principle—prevent the spread of the disease to others—is also far easier to say than to accomplish. During the months when tuberculosis is entrenching itself in the body unknown to the victim, the disease is spreading to others. Early diagnosis is imperative, if we are to check the spread of the disease. Hence, the two principles are parts of the same thing, as the two bars are parts of the cross.

The two principles are so far-reaching, that we can realize the extent of the fight facing the National Tuberculosis Association and its more than 1,600 affiliated associations throughout the country. Our Christmas Seal dollars are the sole support of the fight that is being waged for us—to save our lives and those of our children, our friends, and our neighbors.

When we buy Christmas Seals we are not giving our money to charity. We are investing it in our own health. Tuberculosis is a highly infectious disease. Thousands and thousands of persons have the disease and do not know it. No one is truly safe until all are safe from tuberculosis.

No one can answer for his courage when he has never been in danger.—LA ROCHEFOUCAULD.

Prevalence of Venereal Diseases

An official report from the U. S. Public Health Service, based upon monthly reports of the incidence of venereal diseases in all of the states and in our 39 largest cities, for the fiscal year 1940, contains much material of interest. All figures show the number of cases per 1,000 population.

Among the cities, the best records, as regards syphilis, were made by Rochester, N. Y. (1.0), Milwaukee, Wis. (1.1), Jersey City, N. J. and Omaha, Neb. (tied at 1.2), and Minneapolis and St. Paul, Minn. (tied at 1.4); and for gonorrhea by

Jersey City, Milwaukee, and Philadelphia and Pittsburgh, Pa. (all tied at 0.3). The other cities which stood well on syphilis also made good records on gonorrhea (none higher than 1.4).

Among the states, the low figures for syphilis came from Wisconsin (0.37), New Hampshire (0.45), North Dakota (0.47), and Maine (0.49); and for gonorrhea from Pennsylvania (0.15), New Hampshire (0.19), Georgia (0.24)—but one ques-

tions the adequacy of the reporting of this disease, in view of the fact that this state reported an incidence of 7.45 for syphilis), Idaho (0.39), and Wisconsin (0.4). Those with good records for one disease, also had good ones for the other.

It is notable that the large cities had higher rates than the states in which they are located.

The worst city records for syphilis came from Memphis, Tenn. (13.1), Birmingham, Ala. (13.0), Atlanta, Ga. (12.4), Houston, Tex. (11.0), and Washington, D. C. (10.8); and for gonorrhea from Washington, D. C. (5.4), Dallas, Tex. (5.0), Memphis (4.7), and Houston (4.4). Notice the correspondence.

The worst state records for syphilis were from Mississippi (20.34), Virgin Islands (20.09), Florida (13.94), District of Columbia (10.76), and South Carolina (10.27); and for gonorrhea, from Mississippi (14.39), Virgin Islands (9.0), and District of Columbia (5.36). The correspondence is perfect, as far as it goes, and in the other cases one doubts the

adequacy of the reporting on gonorrhea.

A bit of study will enable any thoughtful physician to make some pertinent deductions, the only one to which we will call attention being that, in every state except Alaska, Maine, North Dakota, Washington, and Wisconsin, the reported incidence of gonorrhea is less than that of syphilis; and the same is true of all the cities except Omaha, Neb. (where they are the same—1.2), Rochester, N. Y., San Francisco, Calif., and Seattle, Wash., in none of which gonorrhea is reported more than 0.4 more prevalent than syphilis. These figures also furnish food for thought.

NEXT MONTH Annual Medical Progress Number

Dr. Woodbridge E. Morris, of New York City, General Medical Director of the Birth Control Federation of America, will write on progress in birth control.

Dr. Robert D. Barnard, of Chicago, will describe a new silver preparation, which appears to have several advantages.

Dr. Miguel S. Duran, of Camalig, Albay, P. I., will present a new treatment of anterior poliomyelitis, which seems to have interesting possibilities.

Dr. George B. Lake, of Waukegan, Ill., will report the recent meeting of the Mississippi Valley Medical Society.

Other articles have also been promised.

COMING SOON

"Picrotoxin in Acute Barbiturate Intoxication," by A. H. Maloney, Ph.D., M.D., LL.D., Washington, D.C.

"Hematuria and Uterine Disorders," by Winfield Scott Pugh, B.S., M.D., New York City.

★ *Leading*



Articles ★

The Importance of Thyroid Feeding in Pregnancy and Childhood

By

H. E. BILLIG, M.D., Los Angeles, Calif.

The prevalence of thyroid deficiency in pregnancy, infancy, and childhood, and the importance of thyroid treatment in these cases is insufficiently recognized.

Dr. Billig discusses these matters clearly and offers practical suggestions for diagnosis and management.

AS AN orthopedist, I am constantly dealing with the so-called "problem children." However, I do not accept this term to describe these patients, for I feel that, instead of being problem children, they are children with a problem. That problem is essentially an inherited endocrine deficiency, mostly seen as some degree of developmental hypothyroidism.

I am firmly convinced that, if mothers were adequately treated during pregnancy, fewer such "problem children" would be seen. Gynecologists and obstetricians are becoming aware that submyxedematous hypothyroidism, with or without hypertrophy of the thyroid, is particularly common during pregnancy. Carl Henry Davis¹ goes so far as to say:

"It will be safer to assume that the hypothyroid woman who becomes pregnant should have thyroid medication as well as iodine. . . . However one may approach the thyroid problem, it becomes evident that control is best accomplished through prenatal care." And, in an earlier publication², this author states: "More recent observations of Marine and others indicate that simple goiter, of the congenital type, may be eliminated in a single generation, provided the mothers have proper medication during the period of pregnancy. However, it seems probable that it may take two or three generations of goiter prevention to eliminate the hereditary factors with cretinism."

The effect of the maternal hormones on the growth and development of the fetus is of transcendent importance. Although some of the endocrine glands begin to secrete their active principles, in minimal amounts, in the later months of intra-uterine life, the internal secretory glands of the fetus are not yet functioning during the period of its most rapid growth, and it therefore depends upon the mother to supply these necessary hormones. It is even suggested, by some authorities, that the infant in utero stores up in its body growth hormones derived from the mother. Thus Isaac A. Abt³ says: "For example, an infant destined to show clinical evidence of hypothyroidism does not usually present symptoms at birth. It is only later, when the stored active principle of the thyroid

gland derived from the mother has been exhausted, that manifestations of hypothyroidism appear."

Concerning the endocrines in relation to growth in childhood, Abt also says:

"1.—The vital elements of hereditary transmission are contained in the chromosomes. The rate of lateral or linear growth and the completed architectural structure of the mature individual are inherent in the chromosomes. Perhaps mental aptitudes also are transmitted through these agents.

"2.—Unfavorable environmental conditions may alter normal growth and development. Among these factors may be mentioned: (1) reduction of oxygen and nutritional material contained in the maternal blood supply; (2) toxic products transferred from the mother to the fetus, or exposure to deleterious conditions after birth; (3) acute or chronic infections of the fetus or the newborn infant; and (4) excess or deficiency of the hormones required for normal growth."

These four unfavorable conditions may be quite comprehensively expressed in the two words, "maternal hypothyroidism."

In a paper discussing the present-day trends in pediatrics, S. J. McClendon⁴ states: "To my mind, the field of endocrinology is one of the broadest in pediatrics. I believe that future developments in it will have far-reaching effects, and that, through its teachings, many of the now seemingly hopeless abnormalities of childhood may be corrected and normal adulthood assured."

In discussing the importance of the thyroid in development, I shall consider the problem from several angles:

- 1.—The effect of hypothyroidism upon the mother during pregnancy.
- 2.—Effect of hypothyroidism in the mother upon the fetus, during intra-uterine development:
 - (a) Infants delivered at term; (b) premature infants.
- 3.—Hypothyroidism in children.
- 4.—Therapeutic recommendations.

Hypothyroidism in the Mother

It has been known and appreciated for a long time that the thyroid commonly enlarges during menstruation and pregnancy, and the frequent occurrence of goiter at puberty or during pregnancy, due to the heightened body-demands, is eloquent testimony of the thyroid-gonad relationship. According to William Wolf:⁵

"In from 50 to 90 percent of all pregnancies, the thyroid gland becomes definitely enlarged;

but at times the enlargement is merely vascular, without hypertrophy. . . Thyroid secretion and the storage of colloid are increased and the iodine content of the gland tends to fall from the normal of 0.2 percent to 0.1 percent or less, while that of the blood tends to rise simultaneously, increasing to 15 to 22 gamma percent.

"The functional activity of the thyroid is increased, in order to enable the mother to care for the combined needs of herself and the fetus. This hyperactivity begins about the third month, becoming quite pronounced by the fourth or fifth month in multiparae, and by the sixth month in primiparae. During the puerperium the gland undergoes involution, but hypertrophy may recur during lactation."

Hypothyroidism is a serious complication of pregnancy, according to E. C. Hamblen,⁸ who states: "The prevention of miscarriage, of extreme gains in weight, and of the birth of hypothyroid infants, can frequently be assured by this therapy. The striking statistics of Litzenberg show the value of thyroid substance in the treatment of sterility and in the prevention of abortion."

The statements quoted from these recognized authorities are interesting for their complete agreement, and are representative of the thought of virtually all authorities on the subject. Thus it is obvious that hypothyroidism is a tremendously important factor in pregnancy, and should be considered and treated routinely with thyroid therapy before; thyroid and iodine during; and thyroid after pregnancy.

We may outline the effect of hypothyroidism on the mother during pregnancy as follows:

- 1.—*First three months:* Decrease in blood-pressure; tiredness, malaise, headache, and constipation; a tendency to abort.
- 2.—*Second three months:* Excessive gain in weight, continued until parturition; muscle cramps; extreme deficiency of muscle tone, with sagging posture; occasional rise in blood-pressure, initiating eclampsia.
- 3.—*Third three months:* Rapid gain in weight; marked relaxation of joint ligaments.
- 4.—*Immediately subsequent to delivery:* Rapid loss of weight; poor supply of milk.

Effect of Maternal Hypothyroidism on the Fetus

Hypothyroidism in the mother will have a detrimental effect upon the fetus. The growth of the child is influenced by the thyroid, pituitary, thymus, and gonad secretions, and any marked deviation from the normal size of an infant predicates an abnormal degree of activity of one or more of these glands, either in the child or its mother. When a child is overweight at birth, inadequate functioning of the maternal thyroid is usually to blame. As a rule, such infants show marked retardation of all the other elements of growth and development.

The child of a hypothyroid mother, delivered at term, is very liable to show these signs: Above average weight; a poor feeder; sluggish; tissue-papery finger- and toe-nails; coarse skin.

If delivered prematurely, there will usually be seen: Lack of breast secretion; inanition, lack of resistance, and poor systemic impetus; below-average weight; tendency to convulsions.

Effects of Congenital Hypothyroidism

Marked alterations in physiologic activity—best described by the term "backwardness"—which are shown by an infant during its first eighteen months, may indicate mild hypothyroidism or even a cretinoid condition. As Wolf⁷ says:

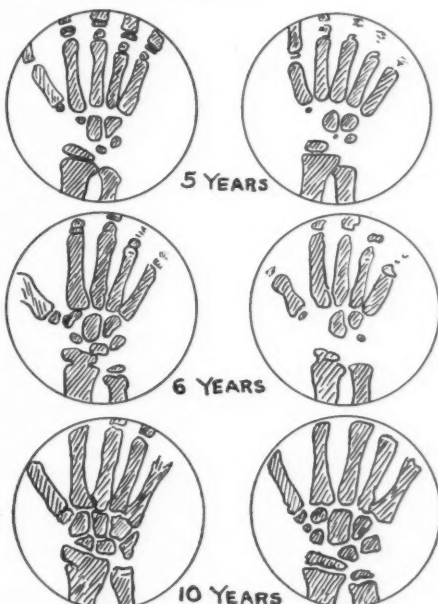


Fig. 1.—Showing the development of centers of ossification in the wrists of normal (left) and hypothyroid (right) children at various ages. Sketches made from roentgenograms in Dr. Shelton's article, referred to in a footnote.

"If, for example, the child does not endeavor to grasp its feeding bottle at the age of three months; does not recognize individuals by the fifth month; is not teething at six months; and not attempting to walk at the end of the first year," then hypothyroidism may be suspected.

The variation from normal in the physiologic activity of hypothyroid children may be outlined briefly as follows:

Gradual loss of excessive weight, to become underweight, frequent feeding problems, with poor thirst; poor muscular tone and relaxed joint ligaments; deficient qualitative bone development, with a low carpal index and delayed epiphyseal appearance time; a tendency to convulsions and the gradual onset of nervous irritability with incipient calcium-lack, tetany signs being frequently positive; tissue-papery finger- and toe-nails, which peel easily; laboratory findings include increased blood-serum cholesterol and low creatinine; excessive lymphoid tissue—adenoid and tonsil.

Hypothyroidism in Children

Most authorities believe that the outstanding characteristic of hypothyroidism in children is overweight, so when this condition cannot be traced to overeating, congenital or acquired hypothyroidism must be suspected. According to Wolf:⁸ "Where overweight is accompanied by other hypothyroid symptoms, such as mental backwardness; roughened, coarse skin; delay in dentition; fragility and caries

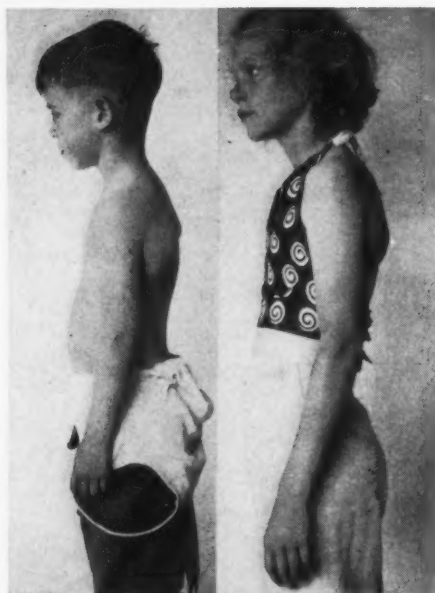


Fig. 2.—Two typical hypothyroid children, of the slender, atonic type.

of the teeth; delay in the appearance of ossification centers (see Fig. 1)*; subjective feeling of chilliness; etc., the diagnosis cannot be in doubt."

Up to the present, I have been in complete agreement with the authorities quoted, but at this point I begin to differ. I know, from actual experience, that for every overweight hypothyroid child that is seen there will be seen probably a hundred *underweight* children. If we think of overweight as the typical finding in hypothyroidism in children, we are going to overlook most of these cases. I am entirely in accord with Hartsock,⁹ who says:

"Incipient hypothyroidism is by far the most prevalent and most difficult to recognize of all the types. If one keeps a mental picture of myxedema before one as a guide to the diagnosis of hypothyroidism, one will entirely overlook 75 percent of the patients who have very mild symptoms of great variation, but who require specific thyroid substance for the relief for these symptoms."

The *hypothyroid stigmata* in childhood may be described as follows: Backwardness, mental retardation, often psychologic maladjustment; underweight much more often than adiposity; enuresis, restlessness at night, possible muscle cramps; lymphoid tissue enlarged; finger-nails and toe-nails are ridged, and peel and split easily; low resistance to infections, lack of endurance, nervous and mental irritability; deficient muscle tone, giving rise to a slumped posture with a tendency to sway-back and protuberant abdomen, also relaxed arches in the feet; lack of thirst and deficient perspiration; delayed epiphyseal appearance time; deficient qualitative bone development, with generalized epiphysitis; retardation of dentition—soft,

crowded, and easily decaying teeth; an allergic history of eczema, colic, and constipation; a dry skin, some degree of eczema, ichthyosis, or urticaria usually present; external genitalia usually infantile or underdeveloped; slow pulse, generally subnormal temperature; pads of fat on the dorsum of the hands or feet; fingers frequently short, feet usually flat.

Importance of X-Ray Studies

The recognition of subnormal thyroid function by studying the relationship of the skeletal system to chronological age was first reported by T. M. Rotch,¹⁰ who noted an advancement or retardation of the osseous development in certain children. Abnormal ossification is characteristic of hypothyroidism in children, and roentgenograms of the hands and feet will show absence or delayed appearance of carpal or tarsal centers. In this connection, Max A. Goldzieher¹¹ states:

"The first center of ossification in the wrist



Fig. 3.—Another slender, atonic hypothyroid child. The two pictures at the left were taken in Sept., 1939; the one at the right in Sept., 1940. In the meantime he had been given thyroid treatment, intermittently, and calcium, physical therapy, and posture exercises continuously, and had gained 9 pounds in weight. Whenever the thyroid was discontinued, he ceased to gain or relapsed.

appears, in the normal child, at the end of the first year of life, and an additional center develops every subsequent year until all eight centers are present. In the following years, these centers continue their steady growth until they reach their final size and shape at adolescence. In the hypothyroid child, fewer centers are seen than the actual age would warrant, hence their 'bone' age is less than their actual age. In older children, where all centers are present, their size may still be considerably smaller than that of normal children of the same age, thus affording a fairly accurate measure of the degree of thyroid deficiency.

"Retarded ossification of the epiphyses is also noted and explains the decreased longitudinal growth of the long bones, due to which the lower half of the body remains shorter than the upper half and the span less than the total height. The short, pudgy hand and stubby fingers of the pre-adolescent hypothyroid patient are also characteristic."

According to Edward J. Lamb,¹² "The vagaries of hypothyroidism are so capricious that the pediatrician should make roentgenograms of

*Shelton, E. K.: Normal Osseous Development. *J.A.M.A.*, Mar. 7, 1931, p. 759.

certain epiphyseal centers of all patients, as a matter of routine. If there is a marked retardation of the osseous development, thyroid medication is usually indicated."

In children the basal metabolic rate (B.M.R.) determination is notoriously unreliable. The diagnosis of hypothyroidism is best made by x-ray studies of the bone age and studies of the blood cholesterol. As E. L. Sevringhaus¹³ points out: "If bone age is significantly lower than chronologic age, or if blood cholesterol is significantly above the normal level by the method in use, the obese child should be given the benefit of thyroid treatment."

Therapeutic Suggestions

1.—*During Pregnancy:* Routine administration of thyroid (preferably a detoxicated thyroglobulin product, such as Endothyrin) daily. Except in marked hypothyroidism, one or two tablets in the morning, one-half hour before breakfast, will usually be sufficient. In more marked hypothyroidism, the doses must be increased to physiologic maintenance levels. Thyroid therapy should be continued for several months after delivery.

Iodine (preferably with a product such as Protiodin), one tablet daily or every other day through pregnancy, and discontinued immediately after delivery.

Calcium Therapy daily, preferably in the form of calcium lactate or gluconate, in an acid medium on an empty stomach.

2.—*Hypothyroid Infants:* In infants delivered at term, the therapy consists of Endothyrin, one-half to one grain daily, as indicated; calcium lactate in lemon juice, as indicated. (Endothyrin Drops offer a convenient method of administering thyroid to infants.)

3.—*Premature Infants.* The treatment is the same as for those delivered at term, consisting of thyroid therapy plus calcium lactate in lemon juice. If the infant is premature and the mother hypothyroid during pregnancy, thyroid therapy should be continued during its entire development; if the infant is premature but the mother was not hypothyroid during pregnancy, care should be ob-

served to stop the thyroid therapy after several months, or as soon as the stimulus to the development of the child's own thyroid has reached normal capacity for its own needs. To continue thyroid therapy past this point may be risky.

In an interesting discussion of this subject, A. Moncrieff¹⁴ reports that the administration of thyroid to premature infants exerts a very beneficial effect. His recommended daily dose is 1/20 grain (B. P. thyroid extract*) per pound of body weight. It is interesting to note that the mortality among such thyroid-treated infants was only one-third that of the control group and, furthermore, that these infants were easier to manage with regard to their feeding and keeping them warm.

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1680 N. Vine St.

Estrogens in Senile Vaginitis*

(Pruritus and Kraurosis Vulvae)

By

BESSIE G. WIESSTIEN, M.D., Cleveland, Ohio

Senile vaginitis and its complications (pruritus and kraurosis vulvae) are difficult conditions to deal with. Dr. Wiesstien presents a method of treatment which seems decidedly promising.

SENILE vaginitis is a nonspecific condition, which occurs after the cessation of ovarian function. Atrophy of the vagina follows, with loss of elasticity and distensibility.

Until the advent of estrogenic substances in high concentrations, the treatment of these conditions, on the whole, was decidedly unsatisfactory, but several reports testify to an almost specific influence of the estrogens in the vaginal disorders of the senium, when given by any route. Davis¹ suggested the use of 10,000 international units (I.U.) every four weeks. On the other hand, Geist and Salmon²

state that larger doses are required, and that 10,000 rat units (R.U.—50,000 I.U.) thrice weekly, supplemented with suppositories used daily, give the most striking results. In the treatment of kraurosis vulvae and pruritus, they infer the advisability of continuous treatment. My experiences in the treatment of these conditions indicate that smaller doses than those previously thought necessary may be satisfactorily employed.

One result of this study is the recognition of the necessity for taking account of environmental and psychic factors. The relative importance of the medication and the psychic factors will be brought out presently, by detailing the course in several typical cases.

I have selected 18 patients, who have presented, as their chief complaint, symptoms referable to the genital tract, the most outstanding one being pru-

*From the Endocrine and Gynecologic and Obstetric Clinics, Mt. Sinai Hospital.

*Endothyrin Drops, in a dose comparable to that suggested by Moncrieff, would be approximately one-half drop daily per pound of the infant's body weight.

ritus; a few had vasomotor discomforts, ranging in severity from mild to severe; 4 had marked

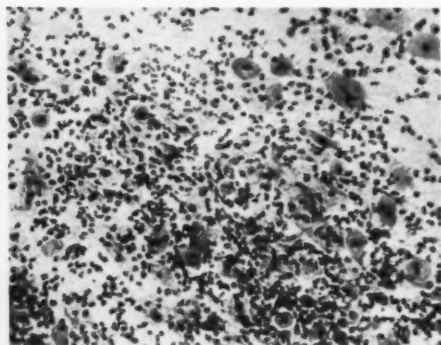


Fig. 1:—A typical atrophic "negative," or "dirty" smear. Note many small, deep epithelial cells, closely grouped, with relatively large, deeply-staining nuclei; many leukocytes (pus cells); and general "dirty" appearance.

changes in the vulvo-vaginal mucosa, designated as kraurosis vulvae; the others showed various changes accompanying senile and atrophic vaginitis.

The ages of the patients ranged from 39 to 65 years; 6 were less than 50 years old, and 12 above the age of 50 years. Four (4) had experienced an induced or artificial menopause; whereas 14 had passed through a natural menopause.

General Clinical Factors

All of the patients had had gynecologic examinations, and their pelves had been found free of infections, such as cervicitis, trichomoniasis, yeast or fungi, and gonorrhea. Blood-sugar estimations, blood-cell counts, dextrose tolerance tests, urinalyses, and basal metabolic readings were made where indicated; and almost weekly, vaginal smears were studied. The patients were questioned closely at their clinic visit, avoiding, as far as possible, any leading questions, and allowing each patient to state her reactions in her own words.

The clinical progress in general was carefully noted, as well as making inspections of the genitals at the time of taking the vaginal smears. Smears were taken according to the technic of Papanicolaou³; and most of them were stained according to his technic; but some, for quicker reading, were stained with 12-percent aqueous acid fuchsin for one minute.

According to Papanicolaou and Shorr⁴, there is a marked variability in the initial smear picture in the menopausal case, and an overlapping in some of the alterations under treatment, which renders a rigid schema inaccurate and misleading.

I have designated the "negative" or "dirty" smear as one resulting from minimal or absent ovarian activity. It is characterized by haziness, numerous leukocytes, and few or many deep cells; small, round or oval epithelial cells, with large and deeply-staining nuclei; and some red blood corpuscles (see Fig. 1). With estrogenic therapy, the haziness disappears; cell grouping thins out; deep cells diminish or disappear; nuclei become smaller; epithelial cells larger and sharper in outline; and the leukocytes diminish. This condition has been designated as "moderate" or "advanced" (see Fig. 2).

The follicular smear is clear and shows an absence of deep cells, but presents large, flat, clearly-

outlined epithelial cells, with very small or pyknotic nuclei (see Fig. 3).

Clinic patients, particularly of the type under discussion, present many social and economic problems which aggravate their condition. Particularly is this true in this type of patient. Psychotherapy, in the form of a friendly chat, aids in reassuring and quieting the patient. Care has to be exercised in discriminating between cause and effect.

This report is based upon 18 cases of senile vulvovaginitis, treated with various estrogenic preparations. Of these patients, 16 complained of pruritus; 6 of burning sensations; 9 of a vaginal discharge; and 14 of vasomotor symptoms. In 17, the vaginal discharge, before treatment, was "negative" or "dirty," and in 1 as "follicular" or normal.

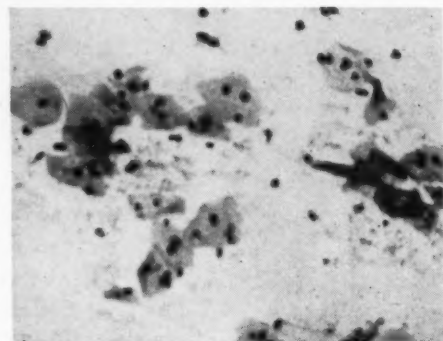


Fig. 2:—A typical "moderate" or "advanced" smear. Note that the epithelial cells are larger and their nuclei smaller; pus cells much fewer; and general appearance "cleaner."

As a result of treatment, 8 of the formerly "dirty" smears became "follicular," and 9 "advanced."

From the clinical standpoint, relief was noted in 7 patients who received as little as 20,000 international units of estrogenic substance, given parenterally; vaginal suppositories, each containing 2500 rat units (12,500 I. U.) of estrogenic hormone, were used in 2 patients, one with marked vasomotor disturbances, and the other, aged 65, received excellent, but temporary, relief from a very marked pruritus with kraurotic changes. This patient is being followed. She returns for estrogenic ointment, which always gives relief and brings about a change in the vaginal smear. In 8 patients, inunctions alone were used. Following cleansing, one gram (5,000 international units) of Estromone ointment* was applied daily. Relief was noted in as short a time as seven days, and was delayed as long as three weeks. The symptoms recurred in some instances. One patient received only oral therapy (4,000 international units daily, of Estromone), and showed a "follicular" smear in 21 days.

Serial endometrial biopsies were taken in 4 patients, and vulva biopsies in 2 patients with kraurosis vulvae, which is one of the most harrassing and intractable conditions associated with the menopause. Both of these patients are being carefully watched. One kraurosis patient failed to respond to repeated calls, but returned to the Clinic, after a long absence, with acute, edematous vulvitis superimposed on the kraurotic base. Of the two we

*In 3 cases, Progyon DH (alpha estradiol), an estrogenic hormone ointment, was used, in doses of 1,000 or 5,000 rat units (5,000 or 25,000 I. U.).

are following, one is reported in full in Case 3; the second, age 51, still bleeds every three to six weeks, and gives evidence of a secretory endometrium with excess estrin effect. Her symptoms of burning and pruritus have returned after freedom from them for several months, during which she had no ointment. Objectively, there has been little change. The tissues looked warm and showed kraurotic changes and fissuring of the perineum.

It has been shown that estrogens are absorbed by the skin^{1,2} but not enough is absorbed by this route to keep the patient, suffering with marked vasomotor symptoms, free of discomforts. In only one patient was parenteral medication given, and then for only a short time.

Case Reports

Reports on three patients, receiving estrogenic therapy by three different methods of administration, follow:

Case 1: Mrs. G., age 56, was referred to the endocrine clinic, for treatment of vaginal burning and itching, June 12, 1939. Her vaginal smear was "negative." She was given tablets of Estromone, each containing 2,000 international units, one to be taken, by mouth, twice a day (4,000 I.U. daily dose).

In ten days (June 22) the burning decreased and the patient felt less tired. Her vaginal smear was clean and "moderate." Improvement continued. On July 3, as she had taken all her tablets, she was given one dose of 10,000 international units, hypodermically, and a fresh supply of tablets, the dose of which was reduced, on July 10, to one every other night.

Between July 17 and 24 she was on her vacation, without medicine, and on the latter date her smear was "moderately advanced."

On September 11, vulvar itching began again and she had a few hot flushes. Her smear showed slight regression. She was given more Estromone tablets, 2,000 I.U. each, to be taken once daily, by mouth. On October 9, though taking no medicine, she felt "fine" and her smear was "follicular."

On October 23, she noticed a slight vaginal discharge. Since then she has been seen on and off and kept comfortable with little treatment, though she has been under real emotional strain.

Case 2: A well-developed woman, age 57 years, was first seen on October 27, 1939, and complained chiefly of "bloody urine," though this was doubtful, as there had been no dysuria or frequency for the preceding 3 or 4 days. She also complained of recent insomnia and multiple joint pains, and of flushes and sweats for the past 8 years. She was very emotional.

Her history showed only that she had her last menstrual period 7 years previously, the periods having been regular up to a few years before they ceased. She has undergone cystoscopy and pyelography a few years before, with a tentative diagnosis of ureteritis, but no recommendations had been made.

Physical examination of her head, mouth, chest, and abdomen showed no findings of importance, except moderate hypertension (blood pressure 160/100).

Pelvic examination disclosed a narrowed and contracted introitus; thin vaginal mucosa; and an oozing area (or ulcer) over the portio vaginalis. The uterus could not be well mapped out, but gave the impression of being atrophic. The cervix was in the axis, with a pin-point os.

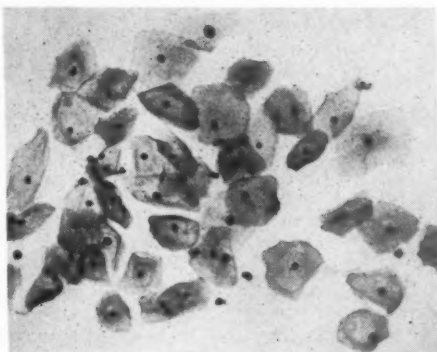


Fig. 3.—Typical "follicular" or normal smear. Note large, flat, clearly-outlined epithelial cells, with very small nuclei; almost no pus cells; general "cleanness."

Vaginal smears showed many red corpuscles, pus cells, and deep cells.

The urine was negative, except for an occasional red blood cell.

Cystoscopy: The cystoscope passed without any difficulty, and revealed no evidence of ulcer, tumor, stones, diverticulum, or polyps in the posterior urethra. Her bladder capacity was normal. The catheterized urine was clear and contained no albumin or sugar, casts, or red blood cells. An occasional leukocyte was seen.

The tentative diagnosis was: *post-menopausal vaginal bleeding and senile vaginitis.*

Treatment: She was given 10,000 international units of Estromone, hypodermically, on October 27, 28, and 30, and on November 3 no blood was noticed; she was less tense and more at ease; but had experienced an increased number of flushes. Her vaginal mucosa was moist and more normal in appearance. Her blood pressure was 140/88. On November 3 she was given tablets, to take by mouth, each containing 600 rat units (3,000 I.U.) or 0.5 mg. of crystalline α -estradiol, one to be taken daily, and a high-vitamin, low-carbohydrate diet was prescribed. On November 10, her vaginal smear was reported as "moderately advanced."

From that time on she received no parenteral medication, and the tablets were taken by mouth every second night. On Nov. 15, her smear was "follicular"; she was feeling well; and the tablets were ordered every third night.

On December 7, she had been without medicine for several days, and her vaginal smear showed occasional deep cells in an otherwise "follicular" specimen. Her blood pressure was 128/96. A few weeks later she was feeling "excellent," and her smear was "follicular."

From that time on, she took her tablets irregularly, every 2 or 3 days; her vaginal smear continued normal in appearance; and there was no bleeding. Seven weeks later, she reported, by telephone, that she was feeling very well.

Case 3: Mrs. S. F., age 49 years, was referred from the neoplastic clinic, on February 1, 1939, because of distressing vulvar and peri-anal itching. She had also been seen in other departments before reaching the endocrine clinic.

Chief Complaint: Itching of the genitals for the past three years; hot flushes; insomnia; and

nervous irritability. She was unable to do her housework without great effort.

Her past medical history revealed nothing of importance bearing on this case, except that she had undergone a fundal hysterectomy, bilateral salpingectomy, right oophorectomy, and partial resection of the left ovary, six years earlier. Her menses had always been regular and moderate up to the time of her operation. After that, the periods were regular, every 28 days, but scant and of only 2 days' duration. Three years later, following a nervous shock, the patient stopped menstruating entirely and the present conditions began to develop.

Physical examination showed a well-developed, white female, short of stature (5 feet), weighing 144 pounds. Nothing unusual was found except the local conditions—marked leukoplakic changes in the vulvar mucosa and over the perineum and peri-anal regions; a painful anal fissure, posteriorly; and a vagina which was quite dry.

Laboratory Findings: Her vaginal smear showed numerous large and many deep epithelial cells, with moderate-sized and large nuclei. Her urine was negative; blood-cell count and serologic tests, negative. Her first dextrose tolerance test showed a high curve, and she was referred to the diabetic clinic for an opinion, the report being that she was not diabetic. Her basal metabolism was plus 3 percent; pulse, 60.

Diagnosis: Kraurosis Vulvae.

Treatment: The patient was started, on February 2, 1939, with 10,000 international units of estrogenic substance, hypodermically, twice weekly; and injections of 5,000 rat units (25,000 I.U.) of a-estradiol every night, following gentle washing of the parts.

On February 23, her vaginal smear was clean ("follicular"), and the first of three endometrial biopsies was made, but very little tissue was obtained—insufficient for a diagnosis.

On February 27, there was marked improvement in the peri-anal skin and the patient felt relieved.

On March 3, a biopsy of the right side of the vulva was made, and the report of pathologist was, "kraurosis vulvae." However, the skin was clean around the anus; there was no itching; and only an occasional flush, though she had had no treatment for 4 days. She was told to use $\frac{1}{4}$ the amount of ointment she had used up to that time. Vaginal smears were taken at each visit, and on April 22 she reported a slight return of the itching, on the left side, and one severe flush, so we started giving her 10,000 international units of estrogen, hypodermically, twice weekly for 4 doses.

On May 3, her breasts were swollen and painful, just as if she were going to menstruate, and there was slight itching of the vulva. She had had an extra amount of home worries.

On June 5, she reported that there had been no itching for the past two weeks, and that she was sleeping well and feeling, generally, very well. Her vulva was soft, and handling did not produce the sensory disturbance that had accompanied earlier examinations. Her vaginal smear was clean, grouped, leukopenic, with a few large, flat cells. She was out of ointment.

On June 15, there was a moderate return of flushes, a slight itching, and her smear was regressing (she had had no medicine for two

weeks). She was given 1,000 international units of Estromone.

On July 27 and August 24 she reported that she was comfortable.

On September 21, she reported feeling "very well"; her vaginal mucosa appeared pinker and softer to the touch; there was no itching; the patient was working hard and sleeping very well; her smear was "follicular" (no pus cells and less grouping).

Most of the time, through October and November, she reported feeling energetic, in fine spirits, sleeping well, and having no itching. Early in November she had some unusual worries, was anxious and nervous, and had some vulvar itching for a few days. She was given tablets, each containing 2,000 international units of Estromone, one to be taken daily. On December 1, her clinical condition was still excellent; her vulva and vagina were moist; and her smear was "moderately advanced."

On January 5, 1940, she reported that itching returned sporadically. On close inspection, small, round, pale lesions were observed in the genital folds, extending to the thighs. Inspection of the entire body revealed lesions on the wrist and ankle, which itched a great deal. Macerated skin was found between the toes, confirming the diagnosis of ringworm. The vulvar mucosa appeared quite normal in larger areas than heretofore; leukoplakic areas were disappearing; and in spots the thickened, whitened surface had curly edges, which seemed ready to be removed. The patient has been seen infrequently since then. Her last visit was in September, 1940, when her condition was much improved. She uses estrogenic ointment only occasionally.

I present this last case because of the marked relief, obtained in a short time, from a most distressing complaint, from which the patient had suffered for more than three years, and which drove her, in desperation, to seek help in whatever manner might be prescribed. The clinical relief was accompanied by objective changes in the vulva and peri-anal tissues. The mental and emotional picture changed with the morphologic changes, as shown in the condition of the tissues and the vaginal smears.

Summary

1.—The value of the vaginal smear, as a diagnostic aid and an indicator in the efficacy of estrogenic therapy, is now clear.

2.—The therapeutic value of estrogenic substances, used in relatively small doses, in many cases of senile vaginitis, is clinically demonstrated.

3.—Estrogens, regardless of their chemical constitution, give relief in these conditions.

I wish to express my appreciation to Dr. Samuel M. Gordon, of Endo Products, Inc., for a supply of Estromone in oil, tablets, and as an ointment; and to Dr. Max Gilbert, of the Schering Corporation for estradiol ointment, suppositories, and tablets.

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 10515 Carnegie Ave.

Adrenal Cortex by Mouth for the Tired Patient

By

R. L. GORRELL, M.D., B.S.M., Clarion, Iowa

There still seem to be a good many physicians (most of whom never tried them) who believe that endocrine preparations do no good when given by mouth.

Such individuals (and most other medical men, also) will do well to read Dr. Gorrell's extensive digest of the literature and the reports of his own experience in giving adrenal cortex orally.

TIRED patients, like the poor, we have with us always—and like the poor, we do not know what to do with them.

Savill¹ writes, "Malaise, lassitude, general debility, inability to complete a day's work, are some of the terms used to describe the symptom of weakness. Here, we shall often meet with the beginnings of disease—beginnings which may lead to a serious or even fatal issue. The patient may attribute his ailment to a 'digestive upset,' or think he has been 'working too hard,' or 'wants a change,' and perhaps he calls on his physician 'as he was passing,' just to confirm his diagnosis and 'give him a tonic.'

"These cases may tax the young practitioner's skill and tact in several ways. Fresh from studying instances of marked diseases in hospitals, he may regard such cases as trivial and uninteresting; and even if he detects the beginning of some insidious malady, the patient may meet his suggestion of some serious ailment, not only with surprise, but even with resentment or distrust. The practitioner may find it wise to communicate with a discreet friend or relative."

If there is *persistent* evidence of weakness and loss of weight, serious organic disease must be excluded by a *thorough* examination (physical, hemoglobin estimation and red-cell count, urinalysis, tuberculin test, x-ray studies of the chest, et cetera).

The usual office patient who complains of mild to moderate fatigue, unaccompanied by symptoms or signs of organic disease, should lead one to consider the possibility of hypoadrenia (mild Addison's disease). The typical picture of weakness, low blood pressure, and pigmentation of the skin is diagnostic, but rare.

Diagnosis of Adrenal Insufficiency

There is no test absolutely diagnostic of adrenal insufficiency. One procedure which has been advocated is the restriction of salt in the diet, in an attempt to bring on a crisis of Addison's disease, which is as logical as letting a diabetic patient go into coma or kicking a patient with a gluteal abscess. It must be remembered that patients cannot always be saved from such crises, even with injections of adrenal cortex extract and saline solution.

Sodium and chloride concentrations in the urine

may be estimated, when the patient is under standard conditions of diet. This involves a simple metabolic study and necessitates only a determination of the urinary chlorides, but may precipitate signs of adrenal insufficiency². The effect of adrenal cortical hormone on renal excretion of sodium, chlorides, and potassium requires careful studies in a metabolic unit.

Gordon, Sevringhaus, and Stark studied the effect on the blood pressure and symptoms in 32 patients complaining of asthenia. Seventeen (17) were definitely benefited; *symptoms and hypotension responding to adrenal cortex therapy indicate adrenal insufficiency*³.

"There are probably many more cases with hypoadrenal activity of chronic types, in which the diagnosis of Addison's disease is not justified by conventional usage, but in which the fundamental difficulty is similar but less marked than most physicians realize. No definite diagnostic terminology or criteria are accepted for such cases. They are being increasingly considered as mild hypoadrenia."

Wolf⁴ says, "Addison's disease is characterized by a syndrome of *lowness*—low basal metabolic rate, low temperature, low blood pressure, low muscular tone, and low mentality. The exceptions are high blood urea and blood potassium, and high excretion of sodium chloride."

Reed⁵ points out: "The clinician sees patients who complain of asthenia, anorexia, easy tiring, palpitation, languor, variable abdominal pains, often unexplained nausea, vomiting, and diarrhea, with no evident reason apparent on physical examination. The systolic blood pressure is below normal. The basal metabolic rate is little, if at all, depressed. The diagnosis of neurasthenia seems inevitable and equally unsatisfactory . . . The administration of adrenal cortical extract is most striking in its results and more lasting in its effects than any other measure. . . . It seems logical to expect that *adrenal insufficiency may exist in all degrees short of the picture of Addison's disease*, and that such deficiency may follow other causes than organic destruction of cortical substance."

Weiss and Eggleston,⁶ in their review of the literature, state that there is difficulty in making a diagnosis in patients who do not present the classical signs and symptoms, and that the tests suggested (restriction of sodium chloride completely or partially, to bring on signs of adrenal insufficiency or to study chloride excretion in urine) may be disastrous.

Effectiveness of Adrenal Cortex Given by Mouth

Opposed to the older opinion, that thyroid extract was the only glandular principle which was effective when given by mouth, a number of inves-

tigators have shown that adrenal cortex extract is potent when given orally.

Thorn, Emerson, and Eisenburg⁸ write: "The oral administration of a concentrated extract of adrenal cortex has resulted in a decrease in renal excretion of sodium and chloride and an increased potassium excretion, in patients with Addison's disease and in bilaterally adrenalectomized dogs. Such dogs have been maintained for prolonged periods and no toxic effects have been observed. The extract should not be used orally in the treatment of an acute Addisonian crisis."

"Oral administration is efficacious in the treatment of animals with experimental adrenal insufficiency, and in the treatment of patients with Addison's disease" (Weiss⁹).

Britton, Flippin, and Silvette⁷ state: "Our results from the oral treatment of adrenal insufficiency have been characteristically positive. In animals in which definite symptoms of adrenal insufficiency have been allowed to develop, complete recovery to the normal active condition was observed on administration of cortico-adrenal extract by mouth."

Grollman and Firor⁴ write: "The hormone is non-protein in nature, hence, unlike insulin, it is not subject to proteolysis in the gastro-intestinal tract."

Rogoff and Stewart⁵ have treated Addison's disease patients with a glycerol extract, administered orally. Grollman maintained adrenalectomized dogs by means of oral treatment with a charcoal-adsorbate preparation of adrenal extract¹⁰. Thorn, Kendall, and Eisenburg¹¹ review the successful use of oral cortical treatment, and remind us that Osler used it successfully (apparently the first time adrenal cortex therapy was employed) in 1895.

Hartman, Thorn, and Durant¹² write: "Patients with early Addison's disease may respond so well to oral therapy that, under continuous treatment, they return to normal activity. The false sense of security which is experienced may lead them to be careless of, or even stop, treatment. Glycerol extract has resulted in increased ability to perform work, elevation of blood pressure, increased appetite, gain in weight, and decreased nervousness. It is impossible to establish a definite diagnosis of adrenal insufficiency in these patients. However, the characteristic response to treatment with cortex extract makes the diagnosis highly probable."

Goldzieher¹³ is impressed with the effectiveness of this type of therapy. Pottenger¹⁴ has shown that an alcohol-benzene extract is effective in causing sex maturation and testicular descent, when administered orally.

Those readers who would like to obtain more complete references may consult the articles and books of Grollman, Firor and Grollman⁴; Blackman, Jordan, and Jarvis¹⁵; W. O. Thompson¹⁶; Hartman and Pohle¹⁷; Thorn, Kendall, and Eisenburg⁸; Rogoff and Stewart⁵; Cary Eggleston and Soma Weiss⁹; Grollman¹⁰; Pottenger and Simonson¹⁴; Britton, Flippin, and Silvette⁷; Grollman and Firor⁴; and Hartman, Thorn, and Durant¹².

Hartman and Pohle¹⁷ write: "Glycerol extract is especially effective in early Addison's disease." Grollman¹⁰ states: "All adrenalectomized dogs survived normally, so long as an adequate amount of the hormone was added to the food." Barbour¹⁸ gives suprarenal gland by mouth in the treatment of bronchial asthma, spasmodic

croup and cough, pylorospasm, eczema, and hypothyroidism in children.

Diagnostic Points in the History

The history of the tired patient may yield much valuable information, if properly evaluated.

A neurosis is no bar to organic disease.

SYMPTOM OR SIGN	SIGNIFICANCE
<i>Time of Day</i>	
1.—"More tired when I wake up than when I went to bed"; feels stronger in the afternoon.	Neurasthenia
2.—Feels strong in the morning; tired in the afternoon.	Organic disease
3.—Weak before meals or when a meal is missed.	Hypoglycemia
<i>Produced by</i>	
4.—Nervousness, excitement, or is just as tired after little work.	Neurasthenia
5.—Definite work.	Organic disease
<i>Relieved by</i>	
6.—Rest	Organic disease
7.—Change of environment, avoidance of disagreeable tasks; rest does not relieve.	Neurasthenia
<i>Living place</i>	
8.—Living or working in poorly ventilated rooms; heaters without vents; traffic policemen; truck drivers; round-house workers.	Carbon monoxide poisoning
<i>Region</i>	
9.—Formerly lived in the South or Tropics.	Malaria; hookworm; other worms.
<i>Age</i>	
10.—If over 40 years of age, severe fatigue.	Cardiac disease, diabetes, Addison's disease, myxedema, chronic nephritis, arteriosclerosis, focal sepsis.
11.—If under 40 years.	Tuberculosis, hyperthyroidism, diabetes, neurasthenia, gastro-intestinal disorders.
12.—"Nervous breakdown" in patient or family.	Unstable Personality
<i>Complaint</i>	
13.—"Always tired, ever since I can remember"; "Born tired."	Unstable Personality
14.—"Colitis" or other neurosis.	Hypochondria
15.—Loss of weight over a period of one month (on same diet; no mental stress).	Organic disease

Clinical Use of Adrenal Cortex

Cortinoral* capsules, each containing $\frac{1}{2}$ rat unit (Grollman assay), were given to 18 private patients, in doses of from three to six capsules daily. These patients were not told what medication was being given, when it was stopped, when placebo capsules were given, or what effect it would have, thus ruling out the element of suggestion. The patient who is told that a certain medicine will make him stronger is often only too ready to believe, too ready to substitute optimism for reality.

*Harrower Laboratory, Glendale, California.

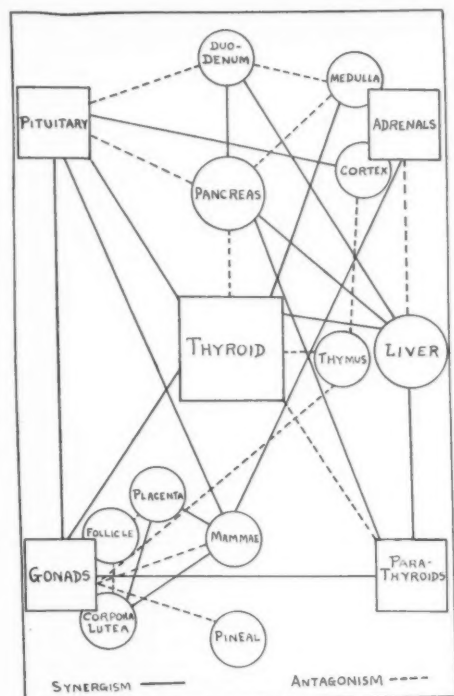


Diagram of Endocrine Relationships, from Harrower's "Endocrine Diagnostic Charts." (These relationships are subject to correction on the basis of any newly acquired knowledge.)

Other organic disease had been excluded by:

- 1.-History and complete physical examination.
- 2.-Hemoglobin estimation and red-cell count.
- 3.-Urinalysis for specific gravity, sugar, albumin in all patients, before therapy was begun. These procedures can be carried out in any physician's office. A few patients had these tests performed:
- 4.-Stool test for occult blood.
- 5.-Tuberculin test and chest x-ray studies, for positive reactors
- 6.-Blood-sugar estimations.
- 7.-Basal metabolism recording.

Time was also used to rule out organic disease, as all of these patients have been followed for one or more years. An open mind was kept as to the possibility of some other disease insidiously making itself evident.

At first, the patients were allowed to take as much salt as was usual for them. Those who did not become stronger, were told to take three to four teaspoonfuls of salt daily (11 to 15 Gm.) with their regular diet. Several patients had voluntarily been on a high intake of salt. Wilder's low-potassium diet was not employed, because patients had so much difficulty in following it.

"In many observations, the administration of sodium chloride has often been combined with the use of adreno-cortical extract, thus making it difficult to determine which produced the beneficial results" (W. O. Thompson¹⁷).

Eleven (11) of the patients felt stronger while taking the extract alone; 2 more felt improved

when large doses of sodium chloride were added. Several patients with hypotension (100 mm., systolic, and below) showed an increase of blood pressure, which promptly dropped to the original level within a few days of stopping treatment. When placebo capsules (liver extract capsules resembling the Cortinoral capsules) were given, weakness would gradually reappear. When large amounts of sodium chloride were added, the dose of cortical extract often could be diminished to two or three $\frac{1}{2}$ unit doses daily.

In the course of the year's study, it was found that the hypoadrenia was temporary in some patients (as after peritonitis and severe influenza) and permanent in others (weakness returned after omitting treatment). Two (2) such patients relapsed, with marked hypotension; another patient, with normal blood pressure, has shown an increase of brown pigmentation on the neck and shoulders (treatment has been intermittent).

Three (3) middle-aged women, who have had the clinical and blood picture of pernicious anemia and were improved after constant therapy with liver extract injections, did not feel really strong until cortex therapy was begun *without their knowledge*, despite the fact that their red-cell counts were above four million.

The true neurasthenic patient is little benefited by adrenal cortex extract. Benzedrine (amphetamine) sulfate, in doses of from 5 to 10 mg. on arising and at noon, make this type of patient more alert and subjectively stronger.

The chief indication for adrenal cortex extract is weakness caused by lack or insufficiency of the adrenal cortex (hypoadrenia; subclinical Addison's disease; convalescence after infectious diseases); it has also been used in treatment of allergic conditions (Blackmar)¹⁸ such as hay fever, vasomotor rhinitis; tinnitus, vertigo, nerve deafness and retrobulbar neuritis; in dementia precox, some forms of hypotension, and in combination with thyroid or pituitary extract in the treatment of glandular deficiencies associated with asthenia.

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Nasal Filters for the Treatment of Common Colds

(A Preliminary Report)

By

JOSEPH B. BIEDERMAN, M.D., Cincinnati, O.

The possibilities of local treatment of upper respiratory disorders have not been widely studied or employed. Dr. Biederman offers a suggestion which may prove decidedly helpful.

THE "common cold" is the ailment to which man is most subject, and accounts for more loss of time than any other illness. The danger of the common cold is not so much in its direct effects, but in the complications that frequently follow—sinus and ear infections, mastoiditis, adenitis, etc.

Although we are not yet sure of the exact cause or causes of the common cold, the most logical explanation seems to be that there is a derangement of the vasomotor system, usually due to a draft striking a part of our body which is usually not exposed to drafts. This sudden exposure to a change of temperature is reflexly transmitted to the nasal membranes, which react, at first, by diminishing the flow of nasal secretions, followed by excessive secretion and swelling of the membranes. This, in turn, impairs their normal functions and permits secondary infection with bacteria.

The normally functioning nose is a splendid first line of defense in warding off a cold. Its four main functions, chiefly performed by the turbinates, are to warm, moisten, and filter the air inhaled, and to secrete a mildly antiseptic fluid. These functions are impaired or completely lost when a cold is present.

An effective means of directly treating colds, sinus disorders, pharyngitis, laryngitis, and bronchitis, is by the use of medicated steam inhalations. The disadvantages of this method of treatment are that it requires all of the patient's time to take the treatment, since he can inhale the fumes for only about five seconds, and then must stop for a while before repeating the process. In the meantime, the colder air strikes the nasal membranes while the head is drawn away from the steam inhaler, and this change in temperature aggravates the "cold."

The ideal treatment for acute infections of the upper respiratory tract is by some method that can act like substitute turbinates while the normal functions of the nose are lost. This method of treatment should continuously warm, moisten, and filter the air, and have a mild antiseptic action.

I have found an effective treatment for these acute infections by using a device to act as such a

substitute, which permits continuous, uninterrupted, treatment of the infected membranes, and at the same time simulates the normal functions of the nose.

In a previous paper¹, I described a nasal filter for use in inhalant allergies, as well as in inflammations of the respiratory tract. The object of this paper is to describe a new, improved nasal filter and to summarize the results obtained in treating 200 patients who had a cold, with this method.

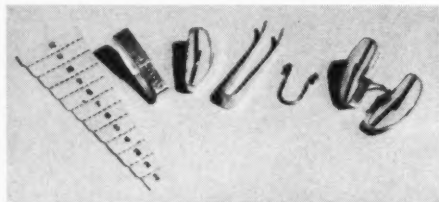


Fig. 1: Parts and equipment of nasal filter.

A perforated and graduated card, with sections numbered from one to twelve, is used to measure the size of the nostril opening. When this has been measured and found to be, for example, size 8, the ends of the filters are compressed to cover the numeral 8, and are then ready for use. For children who may push the filters back into the nostril with their fingers, a detachable band or septal bridge is available, which can be attached to each nasal filter. This band extends outside the nasal septum and prevents children from pushing the filters farther into the nasal cavity. Adults, of course, do not have to use the band, except in cases where the secretions are profuse when the filters are first inserted.

Figure 1 shows, from left to right, the perforated card numbered from 1 to 12; the nasal filter adjusted to size 12 and ready to be compressed to any size desired; the filter adjusted to size 8, with pad in place, ready for use; the tweezers used to remove the filters from the nostrils; the detachable band; and, at the extreme right, the adjusted filters with the detachable band in place.

¹—Biederman, Joseph B.: *Clin. Med. & Surg.*, June, 1940, p. 209.

The filters, adjusted to the nostril size, have a filter-pad placed in them, and this is moistened with six drops of a volatile medicament, composed of camphor, menthol, eucalyptol, oil of peppermint, oil of pine needles, oleum ricinolei, and alcohol, dropped on each side of each pad about every 3 hours. The filters are then placed into both nostrils, where they act like substitute turbinates, because they moisten, warm, and filter the air inhaled, have a mild antiseptic action, and do not permit the cold air to strike the inflamed nasal membranes directly. The inflamed membranes of the nose, sinuses, pharynx, larynx, and bronchial tubes are thus continuously treated with the volatile medicaments, until the respiratory membranes regain their normal functions.

Of 200 patients with colds, treated in this manner, 136 (68 percent) were cured of their colds in 12 hours; 166 (83 percent) were cured in 24 hours; 178 (89 percent) were cured in 48 hours; 188 (94 percent) were cured in 72 hours; 12 (6 percent) were cured between the fourth and the seventh day. Not one complication resulted in the 200 cold patients treated in this manner.

Since patients with colds often show more or less profuse nasal secretion, a question might arise as to the practicability of using these filters in such cases.

The medicaments used to moisten these filter pads have a strong tendency to shrink the swollen

mucous membranes and to diminish or entirely stop the excessive secretion. In fact, in about 95 percent of the cases, these results appeared within ten minutes after the insertion of the medicated filters.

If the secretion is profuse when the filters are first inserted, the septal band or bridge should be applied, so as to facilitate the removal of the filters for blowing the nose. As soon as the secretion is sufficiently decreased to make this unnecessary, the band may be removed.

It is frequently difficult to convince the patient that he should treat his cold until he is *completely well*. He often returns to work while his cold is still present, and is then a danger, not only to himself, but to all who come in contact with him. The nasal filter treatment has been found to be very useful in treating such a patient, because the invisible filter can be worn at work as well as at home. In this way the patient continues to obtain the benefits of the treatment, and at the same time the spread of the infection to others is prevented.

This new method of treating inflammations of the upper respiratory tract, by the use of means to substitute the temporarily lost functions of the normal nose, has been found to be highly effective and now enables the physician to treat the common cold, sinus infections, pharyngitis, laryngitis, and bronchitis, more satisfactorily.

Union Central Bldg.

Spontaneous Rupture of the Gallbladder

(A Case Report)

By

LAWRENCE GREELEY BROWN, M.D., Elizabeth, N. J.

While the common diseases occupy most of the clinician's time and thought, it is well that we should occasionally be reminded of the rare conditions (like this encountered by Dr. Brown), so that we will not entirely forget and overlook them.

BECAUSE spontaneous rupture of the gallbladder is an infrequent observation, a new case should prove to be of interest to all who are engaged in general surgical or medical practice, if for no other reason than the fact that it is always a possibility in disease of that organ, and hence one needs to be on one's guard.

In an active practice of twenty-five years, the case being reported is my first. An inquiry among other physicians, two of whom have been in practice for thirty-eight years, reveals only one other case. I do not recall seeing a single case reported in the literature.

On the evening of May 13, about 11:30 p.m., I was called to see an old patient of mine, a Negro male, 69 years of age, a pullman porter, because of distressing abdominal pains. I had been his doctor for the past twenty-three years and, during that period, had never treated him for any hepatic or gastro-intestinal lesions.

Clinical Course

When I arrived, I found the patient in bed, groaning and in severe pain. The abdomen was

distended and there was generalized tenderness over the entire area, with a definite pain point in the upper right quadrant, in the region commonly occupied by the gallbladder.

A careful examination of this upper quadrant showed right rectus muscle rigidity. A definite mass could be felt, extending from the costal margin to a hand's breadth below it, which appeared to be pear-shaped, with the largest diameter below, and was extremely painful to moderate pressure.

The patient's temperature was 101.8°F.; pulse, between 110 and 120 per minute, very irregular, and with a suggestion of a block; the blood pressure was not taken, but did not appear to be above normal, as measured by the palpating finger. No icterus could be observed anywhere. The upper incisors appeared to be devitalized, and there was a marked degree of pyorrhea alveolaris.

I informed the patient that his gallbladder was diseased and suggested surgery, which he declined to consider because he thought he was too old to withstand an operation. Even though I attempted to assure him that modern surgical practice recognizes no age limit, he would not consent to surgical intervention.

I gave $\frac{2}{3}$ of a grain (40 mg.) of Pantopon by mouth and waited more than half an hour, but this heavy dose merely brought about a slight diminution in the severity of his pain. I then ordered a high enema, with turpentine, which brought instant relief.

The next day (May 14), the laboratory findings were as follows:

Urine: Turbid in appearance; acid in reaction; specific gravity, 1.020; a trace of albumin; no sugar; no bile; no blood; many pus cells; many clumps; one red cell per high-power field; many streptococci; a few mucus threads and squamous cells; no casts.

Blood: Wassermann test, negative; blood sugar, 115 milligrams per 100 cc; Van den Bergh test, direct, negative; indirect, 0.2 milligrams. Blood-cell count: Hemoglobin, 90 percent; red cells, 4,610,000; leukocytes, 17,200; color index, 0.97. Differential count: Eosinophiles, 1 percent; basophiles, myelocytes, and monocytes, none; lymphocytes, 10 percent; meta-myelocytes, 1 percent; polymorphonuclears, 88 percent (many with toxic granules); stab cells, 4 percent; segmenters, 84 percent; no red-cell abnormalities.

I prescribed a diet of skimmed milk, fruit juices, and strained soups, and tablets containing purified bile salts, 1 grain; sodium salicylate, 1 grain; phenolphthalein and ext. cascara sagrada, $\frac{1}{2}$ grain of each, with menthol. These were given, with hot water, every two hours, at the beginning, then every three hours, and then three times a day. Along with this I gave $\frac{1}{4}$ grains of digitalis, 1 mg. of riboflavin, and 1 grain of phenobarbital daily.

At the end of seven days, the temperature came down to normal, the pulse became less irregular, and the rate became slower; but tenderness could be elicited in the region of the gallbladder on moderately deep pressure.

At the end of two weeks, the patient had become perfectly comfortable, except for one thing: He was rather apprehensive about himself and kept admonishing me to take care of him. I assured him that there was nothing to be apprehensive about and that he had made a remarkable recovery, in spite of the severity of his illness. I told him that I would be out of the city from June 3 to 8, and that his recovery was so nearly complete that I thought it would be unnecessary to send a physician to see him during my absence.

I saw him on June 2, when he appeared to be comfortable and contented and was reading the papers in bed. His heart rate was normal, and the rhythm was almost normal. I felt quite proud of the progress he had shown.

On the morning of June 5, while sitting on the side of his bed eating his breakfast, he suddenly collapsed, falling backwards on the bed, with violent abdominal cramps. Soon thereafter, he attempted to vomit. A physician was called, who felt that he was suffering from an attack of intestinal gas pains, brought on by indiscretion of diet. On June 6, this physician had the family call him, and was told that the patient was doing fairly well, so he did not call back to see him.

On June 7, however, another physician was called, because of persistent vomiting and inability to evacuate the bowels, and found the abdomen markedly distended, and that little or no result was produced by enemas. He gave something to control the vomiting (which, however, it did not

do) and saw the patient again on the morning of June 8, when he recognized that the patient's condition was serious, and so advised me on my return.

I saw him on the afternoon of the 8th, about five o'clock. At that time the abdomen was markedly distended; the temperature was sub-normal; the pulse rapid, of small volume, and easily collapsible; and the patient presented the cadaveric facies. I told the family that a viscus had ruptured, that he was then suffering from generalized peritonitis, and that his condition was extremely grave and demanded immediate hospitalization.

He was taken to the hospital about six o'clock, where he was seen by one of the assistant visiting surgeons, who thought that no form of surgery was advisable at that critical period. He was given 1,000 cc. of 5-percent dextrose solution, intravenously, but continued to become progressively worse, and on June 9, at 12:45 P.M., he expired.

Autopsy Findings

The family bitterly opposed an autopsy, but I was able to persuade the members to permit us to do a post-mortem diagnostic exploration, which revealed a plastic peritonitis, with many adhesions. Portions of the jejunum, ileum, and colon were markedly injected and congested and showed beginning gangrene. There was a rupture in the gallbladder, about half an inch in length, from which was discharging a dark, greenish-gray fluid. The peritoneal and pre-peritoneal fat was markedly icterous. The gallbladder was adherent to practically all of the adjacent viscera. The pancreas, kidneys and liver were normal in size and appearance, except for the gallbladder. No stones were found. The appendix was retrocecal, but free, about one-third longer than the average, was swollen, and was covered with an inflammatory exudate on its outer surface. There was no break in the organ and its condition appeared to be a part of the generalized peritonitis. The heart was small, but as we had no permission to open the chest, we had to be content with what we were able to feel through an opening in the diaphragm.

Summary

This was the patient's first attack of gallbladder disease, as shown by the history and by personal observation.

Two physicians failed to recognize that a viscus had ruptured.

Surgery was refused, when it might have saved a life.

Once more we are impressed with the tragic fact that rupture of the gallbladder is a possibility, and when it occurs may cause death.

The first attack of gallbladder disease may well prove to be the last attack, if complicated by rupture of that organ.

To prevent the tragedy which may result from complications, surgery should always be the first consideration when one diagnoses septic disease of the gallbladder.

173 Madison Ave.

CITIZENSHIP

America and its citizens are one. Our country, in its political life, its problems, its reactions to them all, is largely a reflection of the collective living and attitude of its individual citizens. Therefore, to realize the America that is the ideal of every citizen requires the constant practice of the highest citizenship each American knows.—SIDNEY A. COOK.

A Living for the Doctor

The Business of Medicine and the Art of Living



Associate Editor: Ralph L. Gorrell, B.S.M., M.D., D.N.B.

Culture on the Wing

A GENERATION ago (and, to some extent, even today), a man who spoke elegant English, kept his trousers pressed, and manifested some knowledge of painting, sculpture, poetry, and the other arts, was disdainfully called a "dude," a "highbrow," or some other term of intended opprobrium, by the horny-fisted and tobacco-chewing sons of toil and the "hardheaded business men," and could no more be elected to a political office than a camel can go through the knee of an idol.

Today, for many people, the press of exigent toil which was formerly needed to keep body and soul together has abated and they find themselves in possession of a certain amount of leisure—but with no idea whatever as to how it can be profitably used.

This reminds me of the story of the old Arizona Prospector who, after spending most of his life in the mountains hunting for gold, finally found it and cleaned up a tidy fortune, whereupon he journeyed to the nearest city to "have a big time." In his new store clothes and hard-boiled shirt, he sallied into a restaurant, but found most of the dishes on the menu wholly unfamiliar to him. He desired, however, that no one should doubt his ability to pay for the costliest of viands, and so, gazing upward to the heights of his own limited gastronomic experience, he loudly demanded of the waiter, "Bring me forty dollars' worth of ham and eggs!"

"Culture," says Charles Gray Shaw, "is the awakening of one's consciousness to the meanings and value of a life habitually taken for granted." It may also be expressed as the instinctive appreciation of the things that are best and most worthy, in all fields of activity.

Even today, few are able to devote their entire time to the acquirement and development of culture. Is it, then, denied to the steadily increasing numbers of people who are daily recognizing the need of something to fill the hiatus which has

been left when the waking hours are no longer filled with pressing duties?

By no means! The primary requisites for the acquirement of culture are a realization of its beauties and powers and a sincere desire to attain it. If these are present, the seeker can go far in this direction by utilizing the odd moments of each day, which otherwise would be wholly wasted. A small book of good poetry, essays, or philosophy, carried in the pocket, will furnish pabulum for little cultural lunches while one is waiting for or riding upon trains or during the intervals when one might be tearing one's hair or biting one's nails until some tardy person deigns to keep an appointment. Thus equipped, one never loses one's equanimity when one must cool one's heels in an office, lobby, or station.

When started upon this pathway, the earnest culture-seeker will soon find himself visiting art galleries and hearing good concerts more frequently and with steadily increasing appreciation and enjoyment, and will also discover that many of the matters of his daily life are rich with significances which he had never before recognized.

Remember, too, how Dr. John A. Hartwell remarked, "A productive (creative) avocation is the hall-mark of the cultured man." *Everyone* can sing a little, draw a little, write a little (real literary stuff; not merely technical articles); play a little upon some musical instrument; make a really artistic photograph now and then; or do one or more of the hundreds of things which will furnish a satisfying outlet for the Cosmic Urge which lives in, and sometimes torments, us all.

Culture may be captured on the wing, so to speak, by the busy man who really wants it, by utilizing those tags and remnants of his day which now, too frequently, go into the trash can of unprofitable and sometimes vicious "time-killing," or are swept up by the vacuum cleaner of empty idleness.

G. B. L.

Frightened People*

A PATIENT is a case—a case of something that can be looked up in a medical dictionary (B for botulism, T for typhoid); he is also a human being. Both aspects are important to the physician. In the medical schools of thirty or forty years ago, the most elaborate care and attention were given to study of the former, the ailment, in clinic, hospital, and laboratory; no attempt was made to develop any systematic study of the human being.

When a patient walks into a consulting room he requires two kinds of aid from the physician. The first is medical attention, the second is assurance: in the ordinary consultation, the second is as important as the first. The need of assurance is not adequately met by a hearty manner—nor by dogmatism or breezy self-confidence. The world is less suggestible than it used to be, and more obnoxious. Especially in these days of universal education, the assurance offered must be discriminating; it must be pointed at a particular item in the particular mental context—an item that *has been discovered to be there*. This differs in different patients, and is almost always left to the physician to discover.

The physician must, therefore, make two diagnoses: one of the organic ill, the other of the need of assurance. The latter is often simple, rather easily discovered. But it is unwise to ignore it because it is simple.

A person in need of assurance is a frightened person; but it is evident that the nature and degree of the fear will differ in different people. If the assurance is to be of the right kind and addressed to the appropriate locus in every individual instance, then the physician is in need of an approximate classification that will help him to identify, and be sufficiently adequate to, the situation set before him. With this in mind, and for purposes of ordered discussion, I have devised a classification of three types of personal situations. The classification is arbitrary and empirical; it is based upon an approximate estimate of the kind of fear and its distribution in the individual's thinking.

In the simpler cases there is not much fear and what there is tends to attach itself to the actual organic disorder. In the more difficult cases there is a great deal of what has been termed "free anxiety," distributed widely through almost all the patient's thinking. In such a situation as this latter there is not necessarily any immediate or obvious relation between the organic dysfunction and the fear.

1. The first type of case may be described as illness under conditions such that the necessary assurance is almost automatic in the situation. In instances such as these the need of assurance is in the charge of a closely united social group. The physician is an active member of the group and must know how to identify himself with the social reassurance function as he proceeds to technical examination. But everything in the surrounding is saying to the patient, "Here is the doctor. Now you will be all right."

2. The second type of case I specify must be regarded as representing the usual or average medical consultation of today. The patient knows little

or nothing of the doctor; he has been "sent" by someone, friend or physician. And the physician knows little or nothing of the patient—his family, his daily work, his social affiliations. In this situation the second diagnosis, the localization of the need of assurance, suddenly becomes more important. Little or no assistance, explicit or implied, can be expected from the patient's immediate and social background.

A patient with abdominal pain, for example, has given much thinking to identification of the pain with gastric ulcer or malignant disease. Success in treating the organic disorder depends, in part, on discovering what the patient is frightened of as a result of "overthinking."

A patient may bring a minor ill to a physician when he really wishes to consult him on another problem. This is the more characteristic the better he knows his physician.

The reassurance must be addressed to the appropriate person, who is not always the patient himself.

Two comments suggest themselves. The first is obvious, namely, that in such a case effective assurance is the most important part of the treatment. Further, the assurance must not be addressed to the patient only, but to any person in his or her immediate social context whose affection and alarm provoke a consequent increase of alarm.

3. The third type of case includes the really frightened people—those people who suffer a general alarm about themselves, their health, their position in the world. In such cases the ailment may, itself, be organic only in a minor fashion. It may, in a sense be provoked, and it will surely be exaggerated, by the terror and general need of assurance.

The individual is unable, himself, to make articulate the nature of the dysfunction; but he is aware of an exaggeration of the organic condition, and his limited capacity for thought and expression lights upon this, the organic condition, for complaint to the physician. The physician naturally is unable to confirm this expression.

A chance phrase, dropped inadvertently by a physician, may seem in such cases, actually to provoke a disorder. This is not suggestion or suggestibility; there is no imitation of the appropriate organic symptoms, as in hysteria. As a patient left him, a doctor said, more by way of conversation than diagnosis, "Your heart's a bit sluggish; don't get influenza." A week or so later—in 1918—the alarm of "Spanish Influenza" began. The patient lapsed into a condition of extreme anxiety and had to be sent to the city for medical care.

Instances such as this may be multiplied almost indefinitely in any modern industrial or business center. They may seem to approximate or to shade into those cases that demand the special care and attention of the psychiatrist. Nevertheless it must be said that it is not intelligent or sensible for medicine to seek to unload all the personal problems it encounters upon the already overburdened shoulders of the psychiatrist. Furthermore, while many of these cases do not benefit greatly by prolonged "analysis" it is invariably necessary that something should be done to alter and amend effectively their social situation.

It is now apparent that observation of the type and extent of assurance needed has become observation also of the kind of social situation in which

*Harvard Med. Alumni Bull., January, 1939, through Bull. Evanston Br., Chicago M.S., Sept., 1940.

the patient habitually finds himself, the kind of social conditioning that has produced him. The individual who lives in a small and ordered community requires small assurance; the whole social situation, of which the physician is an essential part, conspires to reassure him. In a larger society, an individual assured of his place and function may, as a patient, require assurance. But in this instance the assurance is probably more or less particular, more or less easily discovered—it is something left over, as it were, by the social order.

In these days it is characteristic that the small, well-ordered society is becoming less common, the large industrial and populous centers more common. Especially in these days, then, the physician in his ordinary practice must address himself to two diagnoses—the one a diagnosis of the medical ill in the strict sense, the other a diagnosis of the need of assurance. This latter involves careful investigation of the present situation of the individual, and of his personal and social history. It is, no doubt, possible sometimes to mitigate or banish an organic ill without the second diagnosis: but it is not possible so to cure the patient. The patient is not fully cured until he is himself certain of his restoration to health. Confidence in his medical attendant is established when the relevant personal situation has been brought to light. This is evidenced by a sudden disposition in the patient to "unload" everything upon the doctor. The capacity for assurance that a physician develops in such a context is astonishing—unnecessary pains and other symptoms will disappear almost at a word.

I hope I have made it clear that he has the further satisfaction of knowing that he has contributed some small item of knowledge to the difficult problems—personal, social, political—of our difficult age.—ELTON MAYO, Prof. of Industrial Research, Harvard Univ.

Practical Medicine and the Family Doctor

It is true that the laboratory has done much to clarify the situation and help us on our way. Yet neither laboratory nor symptoms always tell all. It may be necessary to win the confidence of the patient and thereby reach the innermost recesses of the soul, in order to get all the facts and learn the cause of the trouble. The specialist may not be able to attain this view, but the good old family doctor who ushered the individual into this world may, by his fatherly conduct and knowledge of the patient, be able to get at the seat of the trouble as no other one could. By his kindly counsel and advice he may arouse the patient to a sense of duty; may cause him to see things in a proper light, and raise him from the slough of despond in which he has been floundering—without a vitamin in his medicine case. Thereby does such a doctor prove himself a hero in the interest of practical medicine. Incidents of this kind have occurred many times in the past and should not be forgotten. Losing sight of the patient as an individual is failure to carry out the precepts of practical medicine.—J. F. CHANDLER, M.D., in *Holt County (Missouri) Sentinel*, Sept. 6, 1940.

A Medical Sculptor-Gardener

LAST month you saw examples of the work of



artist-physicians, as exhibited indoors. Here is a specimen of what can be accomplished when sculpture is added to the landscaping scheme in beautifying one's home surroundings.

This charming piece is the work of a clever and versatile surgeon, who "carves" other things than human flesh, though he has here carved a human body—Dr. Waller O. Bullock, surgeon to the Lexington Clinic, Lexington, Ky., another of whose sculptures received honorable mention at this year's American Physicians' Art Association Show, in New York.

Dr. Bullock gives full credit for the garden effect to his wife, but we feel sure that his own artistic soul had some part in this delightful arrangement.

N.B.: We wish many of our other readers would send us pictures of the pleasing results of riding their hobbies.—Ed.

Sound Advice

THE late Sir William Osler was fond of telling a story about a young physician who came to Sir William Stokes for advice. After an evening devoted to discussion of medical problems, the young man arose and took leave of his host. At the front gate, Stokes called him back and said, "I am very fond of you, my lad. One final piece of advice. Charlie, don't do too much."—*Jour. Omaha Clin. Soc.*, Sept. 1940.

I have had the counsel of this old friend (CLINICAL MEDICINE AND SURGERY) too long to go back on. It has been coming to my desk more than 40 years. I would hardly know how to do without it. As long as I am dealing with the sick, I expect it to come to me. It has pulled me out of many tight places.—M.L.W., M.D., Texas.



Problem No. 10 (Medical)

Presented by Ralph L. Gorrell, M.D.

Clarion, Ia.

(See CLIN. MED., Oct., 1940, p. 352)

RECAPITULATION: A married man of 25 years, the father of three healthy children, in whom no abnormalities could be found by ordinary physical and laboratory examinations, complained of urgency of urination (he must urinate every hour, to be comfortable), with no pain or objective signs at any time. Urethral and bladder irrigations had aggravated the condition, temporarily.

Requirements: Suggest a diagnosis, other examinations you would have made, and treatment, giving reasons.

Discussion by G. M. Russell, M.D.,

Billings, Mont.

Why was not a pyelogram made? Why was the cystoscope not used? It seems to me that the very methods which might have cleared up the diagnosis in this case have been neglected. The patient might as well have consulted a counter prescriber.

The examinations showed that there was no infection of any kind, so about the only diagnosis left is the supposition of a congenital defect of some kind, inasmuch as the urgency existed from birth. One might assume that it was due to a very small bladder, but I believe that is as far as one would be justified in venturing a diagnosis.

Comments by George B. Lake, M.D.,

Waukegan, Ill.

In a case where a man, apparently in perfect health otherwise, complained of symptoms related entirely to the bladder and the mechanism of urination, it would appear that there is no valid excuse for failure to make, or refer the patient for, urethroscopic and cystoscopic examinations and retrograde cystography, rather than pyelography, as suggested by Dr. Russell, since the urinalysis showed no evidence of inadequacy of the kidneys. The bladder is now so accessible to direct examination, that such studies should be made, routinely, in all cases like this.

Dr. Gorrell's diagnosis may be correct, even though it seems to have been made hastily, largely upon guesswork, but it cannot be accepted without reservations, in the absence of the objective evidence which, today, is so readily available.

The Seminar

Our readers are cordially invited to submit fully worked up problems to the Seminar and to take part in the discussions of any or all problems. Discussions should reach this office by the 5th of the month following the appearance of the problem. Send your problems and discussions to The Seminar Dept. care CLINICAL MEDICINE, Waukegan, Ill.

Solution by Dr. Gorrell

At the time this patient was seen, some years ago, it was felt that he had failed to attain full control over his bladder function. Studies since then, by urologists and surgeons, have shown that bladder dysfunctions may be studied cystometrically (by changes in bladder pressure measured on a recording drum) and segregated into various groups. This patient is an example of the uninhibited, neurogenic type of bladder disorder, of the congenital type.

Nesbitt, of the University of Michigan (see abstract on "The Neurogenic Bladder Disorders," in this issue), writes, "A normal integration of the inhibitory mechanism has not properly developed. These adults are normal, except for urgent, imperative urination without dysuria, and are able to prevent incontinence when urination becomes imperative only by forceful sphincter control."

Treatment: Because of the lack of any serious symptoms or signs indicating a urinary tract lesion, and because his history indicated the congenital nature of the affection, he was not referred for cystoscopic study, but was given atropine sulphate, in gradually increasing doses, until he was taking 1/250 grain (0.25 mg.) four times daily. Tincture of belladonna could have been prescribed more accurately, but most drugstore tinctures are usually of an ancient vintage. He was also reassured that no abnormality was developing in the urinary tract.

Definite relief was experienced—he could go for longer periods without needing to urinate, although the urgency was still present to some extent.

Problem No. 12 (Diagnostic)*

Presented by

Drs. A. C. Lendrum and W. A. Mackey,
Glasgow, Scotland.

A man of 73 years complained of attacks of severe pain in the right arm, over a period of 30 years. He pointed to the outer side of the arm as the seat of the pain, which was so agonizing, if that area was touched, that he avoided crowds, and even slept with his arm over the edge of the bed, to avoid contact with the sheets. Despite his care, the pain gradually became worse, both in frequency and severity, and he knew of no way of relieving it.

At the point indicated, a tiny, bluish tumor was visible in the subcutaneous tissue. During crises of pain, the tumor became turgid and prominent. At all times, the affected arm was colder than its fellow. No other abnormalities were recorded.

What is the diagnosis and what very simple treatment will entirely relieve the pain? This condition was formerly thought to be rare, but increasing number of cases are being reported in this country and in England.

Requirements: Suggest a possible diagnosis, any special examinations you would have made, and the treatment, giving reasons.

*Adapted from Brit. Med. J.



Neurogenic Bladder Disorders*

THE normal bladder has a capacity of from 350 to 450 cc.; is able to initiate and interrupt the urinary stream voluntarily and with full control; and has no residual urine after emptying. There are four groups of neurogenically disordered bladders:

1. *The uninhibited bladder* is a congenital malfunctioning bladder, in which a normal integration of the inhibitory mechanism has not properly developed. These adults are normal, except for urgent, imperative urination, without dysuria, and are able to prevent incontinence, when urination becomes imperative, only by forceful voluntary sphincter control. Some such patients have nocturnal enuresis, although most have educated themselves to avoid this accident. These individuals have invariably been bedwetters until late in childhood, and have always suffered from urgent urination. Many have had cystoscopic examinations and various diagnoses made, the commonest being verumontanitis. Local treatment, particularly following the latter diagnosis, invariably causes an increase in bladder irritability.

Treatment: Tincture of belladonna, in tolerance doses, causes a depression of the parasympathetic reflex and is very effective in relieving most of these patients. Ephedrine is temporarily of value.

The *acquired* type of uninhibited bladder results from the loss of bladder inhibition due to the development of a lesion of the central nervous system, which produces subtotal destruction of the cerebral cortex, or of the spinal cord pathways serving the function of micturition (hemiplegia, brain tumors, multiple sclerosis, pernicious anemia). Drug treatment is the same as in congenital cases, but is much less effective.

2. *The reflexly disordered bladder* follows a profound disturbance in the reflex pathways or centers in the brain or cord (the "baby" type of bladder). Etiologic conditions are: (1) extensive brain lesions (tumors, injuries, spastic paraplegia); and (2) extensive cord disease above the conus level, productive of transverse myelitis (traumatic myelitis, advanced pernicious anemia or multiple sclerosis, cord tumors, or intradural lesions exerting pressure on the cord).

Urination is reflex and involuntary; the ability to initiate or stop micturition is lost; bladder sensation is lost, although the patient may have a vis-

ceral sense of impending bladder contraction to warn him prior to urination. Residual urine, from 1 to 3 ounces, is the rule. Reflexly disordered bladders of small capacity are, unfortunately, the commonest type seen.

Treatment: Local irritating factors (infection, calculi) should be eliminated, in order to decrease bladder irritability and attain greater capacity. Tincture of belladonna is of value, in some cases, in increasing the bladder capacity.

3. *The autonomous bladder* results from an interruption of the reflex arc which controls the bladder, by involvement of the complete sacral cord, conus, cauda equina, or sacral plexus, with destruction of sensory and motor roots, due to traumatic lesions of the lumbosacral spine, inflammatory lesions, neoplasms, congenital anomalies, or spinal anesthesia. Normal sensation is lost and voluntary or reflex urination is abolished. Evacuation is always by overflow. The patient may voluntarily void part of the bladder contents by straining, and thus suffer less dribbling. Residual urine always remains.

Treatment: Many of these patients are made satisfactorily continent by periodic forced emptying. This is best accomplished by straining, reinforced by self-massage of the bladder (Crede type).

Transurethral resection of the hypertrophied internal sphincter has resulted in decreased difficulty in evacuation and decrease of residual urine, but usually this improvement is only for a short time. Presacral neurectomy may be advantageous. In a few cases, which cannot be rendered moderately continent, and in whom renal function has suffered, permanent suprapubic drainage or self-catheterization have been advised.

4. *The atonic bladder:* Normal sensation is absent and the bladder musculature, as a result of progressive, painless overdistention, is markedly atonic and develops little intravesical pressure, even at capacities of from 900 to 1200 cc. No reflex activity is present and voiding is accomplished by straining or by overflow incontinence, with residual urine as high as 600 cc. This is the result of any lesion which destroys the sensory side only of the spinal cord reflex, as in tabes dorsalis, certain cases of multiple sclerosis and pernicious anemia, diabetes, syringomyelia, progressive muscular atrophy, and spinal shock (acute traumatic myelitis).

Treatment: Bladder tone should be preserved. This is of special importance in the atonic bladder

*Penn. Med. J., June, 1940.

of spinal shock, which occurs following acute cord injuries. In early atonic cases, education of the patient to void periodically, by straining and Credé expression, will occasionally prevent accumulation of a large amount of residual urine and provide continence with muscular tone.

The advanced bladder should be periodically emptied, every two hours, by atonic straining, augmented by pressure over the bladder. Drugs, such as mecholyl bromide, prostigmin, and Gynergen have produced no improvement. Improvement in pernicious anemia is often paralleled by improvement in bladder function. Syphilitic patients, treated with malaria, have occasionally shown marked improvement. Constant drainage, by a urethral catheter or suprapubic cystotomy, is employed in bedridden patients.

Spinal cord injury: Spinal cord shock affects the bladder for a period of from one to many weeks; it is atonic; retention and overflow incontinence appear. If aseptic precautions cannot be observed, the safest procedure is to permit the bladder to fill until it overflows through reflex activity. This minimizes the occurrence of urinary-tract infection, but increases the danger of decubitus ulcers and the need for nursing attention. The bladder is left atonic, and recovery is thus delayed.

Immediate suprapubic drainage protects the bladder musculature from overdistention, but does not entirely avoid the danger of infection. The suprapubic tube may finally be removed at the return of reflex bladder activity.

Indwelling catheter drainage also protects the bladder muscles, but invariably introduces infection into the urethra. However, the catheter may be changed at frequent intervals and finally removed when reflex activity of the bladder returns. Munro's method of using an indwelling catheter with tidal irrigations prevents infection in the majority of cases, but demands meticulous care and diligence.

Summary

The treatment of chronic neurogenic bladder disorders is based upon: (1) avoidance or removal of urinary tract infections; (2) eradication of other irritative lesions; (3) reduction of residual urine; and (4) development of periodic voiding and complete or relative incontinence. The acute neurogenic bladder disorders, especially those following cord injury, are apt to be complicated by fulminating infections.

REED M. NESBIT, M.D.

Ann Arbor, Mich.

Pneumonia After Alcohol or Ether

RESISTANCE to pneumococcal infection is markedly lowered by alcoholic intoxication and by prolonged anesthesia with Avertin or ether. As long as the intoxication or anesthesia continues, the normal vascular inflammatory response is inhibited, leukocytes are not brought to the point of bacterial invasion, and bacteria proliferate, even though the animal has been given large doses of antipneumococcal serum.

If bacteria are aspirated into the lungs during deep alcoholic intoxication or during ether or Avertin anesthesia, they will grow during the entire period of unconsciousness, regardless of the

amount of immunity possessed by the body against the bacteria. These studies throw some light on the development of pneumonia postoperatively and after alcoholic stupor.—K. L. PICKRELL, M.D., in *Anes. & Anal.*, Sept.-Oct., 1940.

Peri-anal Tuberculosis

PERI-ANAL infections occur in from 5 to 10 percent of patients with pulmonary tuberculosis, as contrasted to 0.5 percent in the non-tuberculous population. Histopathologic evidence of tuberculous granulation tissue was found in 75 percent of our 50 cases.

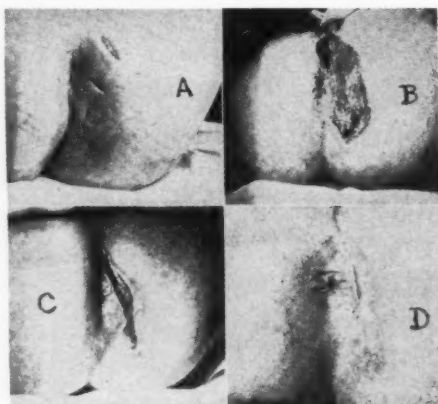


Fig. 1:—(A) A case of peri-anal tuberculosis, showing unhealed incisions and a serpygious, subcutaneous abscess. (B) Appearance one week after complete excision of diseased tissue. (C) Appearance eight weeks after excision. (D) Wound healed, ten weeks after excision.

In our series, multiple lesions (abscesses and fistulas) were the most common. Lesions were frequently extensive, and spread along the course of the superficial peri-anal lymphatics.

Conservative surgery is futile in the treatment of peri-anal tuberculosis, as shown by the persistence of lesions in 40 percent of our patients who had previously been operated upon elsewhere.

Effective treatment demands radical excision of all diseased tissue. Foci of tuberculous granulation tissue must be carefully sought for in the wound and completely eradicated when found (See Fig. 1). Operation in stages is indicated when the lesions are extensive.

Radical measures, when instituted early, should result in a high percentage of cures (90 percent).—DRS. EMIL GRANET AND JULIUS GRENDASY, in *Quart. Bull. Sea View Hosp.*

The Poor Anesthetic Risk

THE simplest, and probably the most reliable, test to give a patient who must undergo surgery is *Henderson's breath-holding test*. It may disclose acidosis, or cardiac, respiratory, or blood diseases. The test is performed when the patient has been lying down for 15 minutes. After observing several normal respirations, one pinches the patient's nose at the end of a normal expiration and instructs

him to keep his mouth closed until it becomes absolutely necessary to breathe. During the apneic pause, the patient should be reassured that no harm will result from the test, and is asked to exercise all his determination to hold his breath as long as possible. The normal period is from 25 to 30 seconds; severe acidosis may be expected when the breath can be held only from 5 to 10 seconds.

Moot's index is valuable in computing cardiac reserve. One multiplies the pulse pressure by 100 and divides the product by the diastolic pressure. The answer or index is approximately 50 in the normal subject. Forty (40) to 60 indicate ample cardiac reserve; if it is below 25 or above 75, the risk is too great.

Barbiturates should be given before local or regional anesthesia is used, as they counteract procaine.—T. J. COLLIER, M.D., in *Anesth. & Anal.*, May-June, 1940.

The Sinusoidal Current in Trigeminal Neuralgia

MORE than half of the patients treated with the rapid sinusoidal current have been entirely free from trigeminal neuralgia for a period of one year. This treatment may be carried out in the office or in the patient's home, thus saving the time and expense of hospitalization. There are no after-effects, such as sensory or motor disturbances, which follow alcohol injections or nerve section; no contraindications; and the treatment may be repeated successfully at any time.

Technic: After a ten-minute treatment with short-wave diathermy, the dispersing electrode is placed in front of the ear, between the pinna and the lobe, and the active electrode over the mental, mandibular, supraorbital, or infraorbital foramen, or on the upper lip to the right or left of the median line, depending upon the division of the nerve involved. The electrodes used are metal discs, covered with felt or cotton thoroughly saturated with water. The dispersing electrode is $1\frac{1}{2}$ inches, and the active electrode $\frac{1}{4}$ or $\frac{1}{2}$ inch in diameter. If there is involvement of the tongue or tonsil, the active electrode is placed directly over the point of pain.

The electrodes are connected, the current is gradually turned on until there is a marked contraction of the muscles under treatment, and is kept at this point for one minute. If more than one branch of the nerve is involved, the same procedure is repeated over the other affected divisions. Treatments are given daily until amelioration is obtained, and then every other day until symptoms subside. The current used is 43,200 alterations per minute. BEN ULANSKI, M.D., in *Arch. Phys. Ther.*, May, 1940.

Otomycosis ("Swimming Pool Ear")

FUNGUS infection of the external ear may be prevented by instilling a few drops of

Boric acid gr. xxx— 2.0 Gm.

Mercury bichloride

(1:1,000) dr. ij— 8.0 cc.

Alcohol q.s. ad 3 i—30.0 cc.
after swimming.

Appearance: The external canal contains debris and the mucosa is inflamed. There may be very little desquamation. Itching is the first and most annoying symptom. If untreated, absorption and scratching soon implant a mixed infection, and the resultant swelling may entirely close the canal with edema and debris.

Treatment: If seen early, the canal should be cleaned and dried, then packed with cotton saturated in Cresatin (metacresylacetate—Sharp and Dohme). In from 12 to 24 hours, the pack is removed and the canal again cleansed and inspected. With the patient lying on the unaffected side, the canal is filled with 1 percent thymol in 90-percent alcohol, which is allowed to remain for five minutes. This preparation is instilled at home, once or twice daily for five days, care being taken that the alcohol does not cause too-deep peeling. This desiccation may be guarded against by application of 5-percent ammoniated mercury ointment. *Never put water in the ear.*

In advanced stages, the patient must be put to bed, constant hot, wet dressings of boric acid applied, and the canal packed with Cresatin or saturated aluminum acetate solution.—C. W. EVATT, M.D., in *South. Med. & Surg.*, June, 1940.

Postoperative Venous Thrombosis

BEFORE and after surgery, venous stasis should be avoided by (1) avoiding excessive falls in blood pressure during operation; (2) early treatment of postoperative abdominal distension; (3) treatment of circulatory diseases before operation; and (4) elimination of unnecessary pressure due to the position of the patient on the operating table or in bed. Tight strapping of patients on the operating table should be avoided. Postoperative abscesses should be drained immediately.

Routine leg measurements, at 4-inch intervals, beginning at the lower level of the external malleolus and extending as high on the thigh as possible, are made on admission, before operation, and before getting the patient out of bed. *Any diffuse increase in the size of one or both legs, over the admission measurements, suggests venous thrombosis, and absolute rest in bed should be maintained until the swelling disappears—usually in from 2 to 3 weeks.* The only exceptions are in cases of cardiac edema and some neurologic lesions affecting the lower extremities (such as hemiplegia). Thrombosis has occurred *preoperatively*. By the use of routine measurements, several cases have been detected that had no appreciable amount of edema.—O. S. CULP, M.D., in *Bull. Johns Hopkins Hosp.*, July, 1940.

Liver Extract is a Potent Tonic

THOSE who have had occasion to give asthenic patients injections of liver extract have often been astonished at the remarkable results obtained. Such patients will often complain of weakness, yet examination will reveal no marked signs. The red blood cell count may be 3,750,000 or 4,000,000 and the hemoglobin may be as high as 85 percent.

The most inexpensive method, for the average patient, to receive the benefits of liver therapy is to give him injections of a potent liver extract at intervals of from seven to ten days. Such a pro-

cedure enables the physician to check the improvement in the blood picture and in the patient's strength.

There is little objection on the patient's part, now that purified liver extract can be obtained which does not cause the patient pain or swelling. One firm's product can be injected into the arm without incapacitating the patient in the slightest.

J. J. Heimark, in *Minnesota Medicine*, May, 1938, writes that he uses liver extract treatment for debilitating diseases from which the patient recovers slowly. He feels that the administration of liver extract to post-influenzal patients shortens the period of exhaustion and general debility, and also recommends its use in the treatment of those patients who complain of weakness and lassitude in the spring and fall.

RALPH L. GORRELL, M.D.

Clarion, Ia.

Local Use of Sulfanilamide

THE direct application of sulfanilamide, dissolved in physiologic solution of sodium chloride, to infected or potentially infected wounds, either by packs or by direct irrigation of the wound, has been of value. The solution is prepared by heating the salt solution to the boiling point and adding sufficient sulfanilamide to make a saturated solution (0.8 percent is the limit of solubility). Irrigations with hydrogen peroxide are carried out three times a day, followed by sulfanilamide irrigations. Wounds are much cleaner and healthy granulation tissue appears after the irrigations. The hydrogen peroxide solution aids in the oxidation initiated by the sulfanilamide.

This method seems especially useful in infected wounds of the scalp, surgical and traumatic wounds of the thorax and pericardium, poorly healing abdominal incisions, infected sinuses of soft tissue, various types of orthopedic wounds, including fractures (especially compound, for prevention of infection), and empyema cavities.—C. W. MAYO, M.D., in *Proc. Staff Meet. Mayo Clin.*, Sept. 25, 1940.

Liver Extract in Eye Disorders*

IN a previous article¹ the use of liver therapy in 10 patients with various retinal conditions was reported, and it was concluded that 5 of these patients had shown a definite improvement in visual acuity which could, with some plausibility, be ascribed to liver therapy.

It is the purpose of the present communications to report the results obtained by liver therapy in 38 additional patients, representing a variety of ophthalmologic conditions.

It seems that the results that have been obtained by parenteral liver therapy may be due to factors not as yet well defined and not as yet characterized as "vitamins." While it may be that the anti-pernicious-anemia factor or factors that have been responsible for the benefit procured in certain patients, there is as yet no evidence that it is this factor which is exclusively concerned.

The liver extract used was furnished by the Armour Laboratories and consisted of their Liver Liquid designed for the treatment of pernicious

anemia, which is adjusted to 4 U.S.P. anti-anemia units per cc.

The usual course of treatment consisted of three intramuscular injections, of 2 cc. each, per week, for a total of 20 or 30 doses. The injections are somewhat painful and leave a soreness which persists for about twenty-four hours. However, children, who made up the bulk of the patients treated, tolerated the injections well. In only one instance was it necessary to discontinue the injections because of intolerance.

TABLE I

Conditions	Cases	Im- proved	No Change
Non-percipient disorders— Blepharosis, cataract, Keratosis, etc.	10*	0	10
Previous to cataract extraction	2*	0	2
Amblyopia, recurrent	2	2	0
Amblyopia, congenital	3	1+; 1±	1
Primary Optic Nerve Atrophy	2	0	2
Retinal Exudate, Uremic	1*	1(?)	0
Retinosis, Pigmentary	3	3 (subjective)	0
Choroiditis, disseminated	8	8	0
Myopia, pathologic, "progressive"	7	5*	2

*In these cases, no conclusions can be drawn as to the effect of the treatment on vision.

±Results were especially good in children. In 2 cases, vitreous opacities disappeared.

Especially good results from this treatment were seen in young patients, who are apt to be helped by better nutrition; in those whose general health was improved by the liver extract; and in cases where the uveal tract was involved.

Of the 38 patients who completed the course of liver therapy, it is possible to evaluate the results in 25 (see Table I).

ROBERT D. BARNARD, M.D.

Chicago, Ill.

Colonic Irrigation

TECHNIC in irrigating the colon has now reached the same stage of accuracy as that of the determination of blood pressure. A new apparatus has been developed which contains a mercury manometer for registering positive and negative pressure at all times. An attached receptacle enables the operators to obtain specimens for analysis at any time, the remainder of the return flowing directly

*E.E.N. & T. Monthly, July, 1940.

1.—E.E.N. & T. Monthly, Sept., 1939.

into the sewerage system. This has outmoded the slop pail, which had to be emptied at intervals and distracted the attention of the technician or physician. Overstimulation, distention, and irritation are avoided, because of the control afforded by pressure measurements.

Indications: Certain resistant cases of arthritis; parasitic infections (medicated solutions are used); intractable dyspepsias and constipation; and mucous colitis. Other conditions, such as hypertension in obese persons, may be treated if it is remembered that the irrigations are only a part of the treatment needed.—WADE CLINE, M.D., in *Arch. Phys. Ther.*, Aug., 1940.

Polyneuritis in Pregnancy

DURING pregnancy and lactation, a woman requires five times as much vitamins as she does when in a normal state. If she attempts to live on her normal intake, she may develop a deficiency disease, which may induce nausea and vomiting. A pregnant woman who vomits continually is inviting the same type of polyneuritis as does the alcoholic who lives on alcohol.

The paralysis usually develops in the third or fourth month of pregnancy; the limbs become numb and painful; deafness, if it already exists in a minor degree, may become complete in this condition. Twenty-five (25) percent of these patients die if they are not heroically treated (10 to 50 mg. of crystalline vitamin B₁ [thiamin] injected intramuscularly or intravenously the first day, and 25 mg. every day for several weeks), or aborted at once.

After delivery, many women complain of excruciating sciatic pain. It is generally believed that this is due to pressure of the baby's head on the sacral plexus. However, this pain can occur in the arms and shoulders. Considering that avitaminosis can continue through the puerperium, it may well be that such pain is another evidence of deficiency disease.—L. J. KARNOSH, M.D., in *Jour. Omaha Clin. Soc.*, Sept., 1940.

Chronic Gonorrhea*

THERE is no lightning or magic cure for chronic gonorrhea. Until more is known about the action of the sulfonamides, they should be regarded simply as *bacteriostatics*, which may, by shortening the course of the disease, enable one to attack the foci of infection earlier and more often, and thus minimize complications.

There is, however, a *positive* method of cure, based upon sound fundamental principles, which will clear up all cases except those in which irreparable damage has been done to the infected structures. In the male, this consists of massage and urethral dilatation, to establish drainage and open up infected pockets so that they can be reached by an effective germicide.

If no sound is used, the germicide is instilled into the prostatic urethra. If, however, dilatation is done, the germicidal solution should, in order to avoid the spread of infection by instrumentation, be injected into the urethra and forced ahead of the dilating sound. Trauma should be avoided if

possible. Treatment should be continued until such time as no pus can be discovered microscopically and the normal circulation of the genital tract is restored. My standard of cure, in brief, is: "A normal prostatic fluid, grossly and microscopically; absence of palpable swelling in the external genitalia; a urethra that will admit a No. 27F sound without pain or bleeding; and urine that contains no shreds."

In treating epididymitis, the scrotum should be supported by sufficient suspension to relieve tension on the vas. Drainage should be improved through the ampulla of the vas and the ejaculatory duct by means of massage, and the germicidal solution instilled into the prostatic portion of the urethra after the obstructing plugs of pus have been expressed.

I urge early, active treatment of acute prostatitis, since huge prostatic abscesses are more apt to occur in untreated cases. Frequent evacuation of the prostatic ducts will assist in preventing abscess formation.

My choice of an antiseptic, based upon 10 years of consistent satisfaction in its use, is a 1:5,000 aqueous solution of Metaphen, which is easy to obtain, relatively inexpensive, nonirritating, non-styptic, and definitely germicidal, in that strength. I use it, from the renal pelvis to the external meatus, whenever local injection is indicated, for prophylaxis before instrumentation and for treatment.

ROY LEE SMITH, M.D.

Indianapolis, Indiana

Fixation for Fractured Clavicle*

DURING the past 3 years, I have treated 29 fractured clavicles by a method of fixation more satisfactory than any heretofore employed. All but three of these fractures were comminuted. Reduction has been done under general anesthesia, in most cases, using smooth clavicle forceps in manipulating the fragments.

The cortical shell of the clavicle is thickest in the middle, thinning out at the ends to an extremely thin plate, inclosing cancellous bone. Thus the central canal is funnel-shaped at both ends, so that a wire, entered at one end, will readily pass into the central canal and traverse it to the other end, following over all the curves. The thinnest wire that can be passed will provide sufficient fixation.

When the fracture is reduced, a 1/4-inch incision is made through the skin, 1 inch from the inner end of the clavicle. Through this, a hole, 1/4-inch in diameter, is drilled in the thin cortex. The direction of the drill is gradually changed from the perpendicular until it points toward the central cylinder.

Through this hole a medium-sized Kirschner wire is passed. If it is started in the right direction, it always traverses the central cylinder and passes across the fracture line into the distal fragment, provided the reduction has been satisfactory. When the wire crosses the fracture line, the clavicle immediately becomes stable, and the arm, shoulder, and clavicle can be moved about quite freely without any displacement of the fragments. The wire is cut short to allow it to disappear beneath the skin, and a small dressing is applied over the incision. If for some reason the wire is to be removed later on, this can be done through a very small incision,

**J. Ind. St. M. A.*, July, 1940.

**J. Bone & Joint Surg.*, July 22, 1940.

under local anesthesia. No other fixation except a sling is required.

As soon as the patient is out of the anesthesia, the arm can be elevated through a full range of movement with little discomfort. Under the fluoroscope, the movements of the shoulder and arm are seen to cause slight springing of the wire at the fracture line, but on no occasion has the wire failed to retain the fragments in good position.

GORDON MURRAY, M.B., F.R.C.S. (Eng.)
Toronto, Ontario, Canada

The Diagnosis of Ectopic Pregnancy

The pain of ectopic pregnancy is dull and continuous, if not ruptured. If ruptured, it may radiate to the shoulder, rectum, chest, back, or thigh. Urination or defecation may be painful.—K. W. WOODHOUSE, M.D., in *Am. J. Surg.*, July, 1940.

Sign	Ectopic	Abortion	Tubal Infection
Bleeding	Amenorrhea; later scant, brown flow	Amenorrhea; later profuse bleeding or clots	Menorrhagia; shortened intermenstrual period
Time of Bleeding	Early (4 to 6 weeks)	Later (8 to 12 weeks)	
Pain	Faintness or vertigo, with sharp pain	Cramplike pain	Attacks of pain increased at period
Vomiting	Frequent	Rare	
Tenderness	Mild or marked tenderness, unilateral, or bilateral	Little tenderness	
Fever	Never, unless late	Never, unless infected	Common
Pregnancy	Signs and symptoms	Signs and symptoms	None

Treatment of Pyelitis of Pregnancy

THE simplest method of treating pyelitis of pregnancy is by putting the patient to bed and giving large quantities of fluids (4,500 cc.), orally and intravenously. This simple routine will cure one-half of all cases. Ureteral drainage is employed in those cases not responding to this regime and for the acutely ill patients.

Mandelic acid is effective against the colon bacillus type of infection, if the urine is tested several times during the course of the treatment to make sure that the pH is 5.5 or less; if the fluid intake is limited to 1,200 cc. in 24 hours; and if 12 Gm. of mandelic acid is given every 24 hours (24 7½ grain tablets or 3 drams, four times daily, of the elixir).

Sulfanilamide, 80 grains (4.65 Gm.) the first 24 hours; 60 grains the second day; and 40 grains the third and ensuing days, is effective against *Escherichia coli* infections, when the fluid intake is limited to 1,200 cc. daily.

Urine examinations should be carried out repeatedly, in later pregnancy and during the first weeks of the puerperium, in those women who have previously had pregnancy pyelitis.—R. D. MUSSEY, M.D., in *West. J. Surg., Ob. & Gyn.*, Oct., 1940.

Bronchostenosis and Asthma

BRONCHOSTENOSIS, a complication of either allergic or infectious asthma, is a definite, localized, strictured narrowing of a bronchus, which decreases the amount of air entering or leaving that segment of lung tissue, and results in retention of bronchial secretions (usually excessive in asthma), so that a region of partial or complete atelectasis results.

Symptoms: Severe, persistent or paroxysmal cough, which is non-productive at first. Later, the sputum that appears is mucopurulent and often blood stained. Fever, with or without chills, may precede the intermittent expectoration of pus.

Fever, hemoptysis, and purulent sputum are never found in uncomplicated asthma. The diagnosis of "bronchopneumonia" in an asthmatic patient may be easily made, because of the appearance of cough, fever, blood-tinged sputum, and physical signs indicating localized congestion (suppressed breath sounds and fremitus over the lower and posterior thorax). A roentgenogram shows a gauze-like shadow, which extends more or less fan-like from the hilum toward the periphery of the lung, in 57 percent of cases.

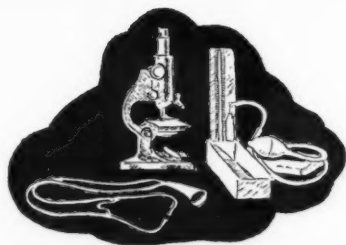
Treatment: Bronchoscopic dilatation of the bronchus and aspiration of secretions.—H. J. MOERSCH, M.D., in *Ann. Int. Med.*, Sept., 1940.

Asphyxia of the Newborn

THERE are two types of asphyxia of the newborn: (1) that of central origin, such as results from injury or laceration of the respiratory center of the brain by edema, hemorrhage, toxins, drugs, anesthetics, or circulatory changes associated with shock; and (2) that of peripheral origin, which results from interference with the entrance of oxygen into the infant's circulation and may occur before birth, from such causes as premature separation of the placenta, interference with the circulation of the umbilical cord, or anoxemia of the mother, or after birth from strangulation, air-passage obstruction, or atelectasis.

It was formerly thought that a baby was born in a state of physiologic apnea and did not begin to breathe until the placental circulation ceased to function and carbon dioxide accumulated in its blood to stimulate the respiratory center. Snyder has shown that regular respiratory movements begin in the last 3 months of intra-uterine life. Moreover, once these movements are established, they are continuous and not interrupted unless some strong influence is exerted upon the fetus. *The normal infant should thus take a breath within a few seconds after delivery and any baby who does not breathe within 30 seconds after delivery must be profoundly affected by anesthesia, narcosis, shock, strangulation, or shock as a result of labor.*

Anesthetics or sedatives may cause brain injury by reason of the anoxemia and consequent lessened amount of oxygen to the brain, and the greater the amount of drug (ether, morphine, Nembutal, scopolamine, paraldehyde, nitrous oxide), the more severe the asphyxia. This is clearly shown in cesarean section statistics: Ether anesthesia resulted in 23 percent asphyxia; local or spinal anesthesia in only 4 percent. The trauma of labor and prematurity of the infant are important causes of asphyxia.—W. C. COLE, M.D., in *J. Iowa St. Med. Soc.*, Sept., 1940.



Diagnostic Pointers

"Chronic Appendicitis"

● The typical patient with "chronic appendicitis" is a high-strung, nervous individual (72 percent are women) 23 years old, single, complaining of epigastric distress after meals; has had one or more attacks of lower abdominal pain (usually in the right iliac fossa); is of the ptotic habitus and generally constipated; shows a normal appendix on pathologic study in 77 percent of cases; and has a recurrence of symptoms in 41 percent of cases after operation.

The characteristic findings on x-ray examination are ptosis and ileal delay at the 5 or 6 hour period. *Therapeutic test:* Treat the patient as though she had pylorospasm (antispasmodic medication; mild sedatives). *Relief indicates that the condition was a spasm of the ileocecal valve.*—B. J. BERNSTEIN, M.D., in *Rev. Gastroent.*, July-Aug., 1940.

Hematuria

● A patient with gross hematuria should be referred at once to a urologist, who will find it helpful to perform a cystoscopy, when possible, at the time bleeding is taking place.—T. R. MONTGOMERY, M.D., in *Northw. Med.*, July, 1940.

Mediastinal Gland Enlargement

● Children with enlarged mediastinal glands show occasional rises in temperature, general ill-health, and a cough that is different from all other coughs. A chest roentgenogram is necessary to make the diagnosis. The best treatment is attention to general health, improved diet, and plenty of fresh air.—*Med. World (Lond.)*, June 14, 1940.

Vincent's Angina and Pellagra

● The complete picture, consisting of a scarlet-red stomatitis and glossitis, diarrhea, bilateral symmetrical dermatitis, and mental aberration, form such a characteristic syndrome that pellagra is easily recognized. Pellagrins are often considered to have only the superimposed Vincent's infection. If nicotinic acid therapy is instituted, not only is the scarlet-red stomatitis blanched in from 24 to 48 hours, but the *Vincent's infection* heals without other general or local treatment.—NORMAN JOLLIFFE, M.D., in *Minn. Med.*, Aug., 1940.

Diabetes and Hyperthyroidism

● In 7 percent of all cases of hyperthyroidism, there is a disturbance of carbohydrate metabolism. *More than two percent of all hyperthyroid patients will remain diabetic for life*, even if properly treated for the diabetes during the active stage of goiter. If not treated, a greater number of the patients will remain diabetic. The severity of the hyperthyroidism bears no relation to the appearance of the carbohydrate disturbance.—H. J. JOHN, M.D., in *West J. Surg., Obst. and Gynec.*, May, 1940.

[In looking over the literature for information concerning a case of hyperthyroidism and diabetes, it was found that very little study has been carried out on this topic. John's observations indicate the correct treatment—treat the diabetes first and then the hyperthyroidism.—Ed.]

The Spoiled Infant

● The "spoiled infant syndrome" consists of anorexia, insomnia, constipation, and attention-getting. Such children later have trouble in adjusting themselves to adult life.—MALFORD W. THEWLIS, M.D., in "Preclinical Medicine" (Williams & Wilkins, Publishers).

Foreign Body in the Eye

● Occasionally a patient will complain of a foreign body in the eye, the irritation being felt only occasionally. One may find an eyelash hidden in the canaliculus which is made visible by massaging the eyelid over the canaliculus toward the punctum.—T. S. PAULSON, M.D., in *E. E. N. & T. M.*, Aug., 1940.

Early Diagnosis of Cervical Cancer

● The "probe" test of Chrobak is based upon the friability of cancer tissue. A small, blunt-tipped probe is pressed against the suspicious area. If the probe sinks in, "as it would in butter," the lesion is probably malignant. If the probe slides off, the chances are against malignancy. Biopsy should be performed if there is any doubt in the physician's mind.

Early cancer of the cervix may appear as a bright-red, irregular, papillary area on the vaginal portion of the cervix, or as a bleeding ulcer which burrows into cervical tissue. In order to see this ulcer, the lips of the cervix must be gently separated.—CATHARINE MACFARLAND, M.D., in *Bull. Am. Soc. Control Cancer*, Sept., 1940.

Thumbnail Therapeutics



Salicylates in Rheumatic Pericarditis

● Salicylates, given in large doses, bring about prompt relief in acute rheumatic pericarditis with effusion. The pulse rate is rapidly lowered and dyspnea and toxemia diminish as the pericardial exudate is absorbed. The action of salicylates seems to be analogous to its action in rheumatic arthritis—the exudate is rapidly absorbed and fever decreases. Salicylates have no effect upon the course of rheumatic arthritis or of rheumatic endocarditis and myocarditis.—E. P. BOAS, M.D., in *J. A. M. A.*, Aug. 3, 1940.

Sulfapyridine Toxicity

● One-half of all adults and one-fifth of children taking sulfapyridine showed some toxic side reactions: (1) Nausea and vomiting; (2) mental disturbances (irritability, depression, confusion, mania, and irrationality); (3) hematuria; (4) urinary stone formation; (5) skin lesions (resembling measles); (6) cyanosis (rare); and (7) anemia and granulocytopenia. Jaundice, diarrhea, lethargy, and abdominal pain are rare symptoms. Constant observation of each patient under treatment will allow earlier detection of symptoms of toxicity while they are amenable to counter-measures, and will permit this valuable drug to be used with a satisfactory margin of safety.—S. KATZ, M.D., in *N. Y. S. J. M.*, May 1, 1940.

Malarial Coma

● Malarial coma, which is most common in estivo-autumnal infections, has a mortality rate of 40 percent, but may be prevented by adequate, early treatment with intravenous injections of quinine dihydrochloride (or other water-soluble salt), in 10 grain (maximum) doses for the average adult, diluted with from 20 to 300 cc. of physiologic saline solution and given over a period of 30 minutes.—CONLEY H. SANFORD, M.D., in *Ann. Int. Med.*, July, 1940.

Taking Bitter Medicine

● If, before taking bitter medicine, the tongue, especially the back part, is well rubbed with ice, the taste buds will be so obtunded that the objectionable flavor will not be noticed.—*Science News Letter*, quoting DR. H. TANGU in *J.A.M.A.*, Apr. 22, 1939.

Ringworm of the Feet

● By treating stockings with a fungicide (oxy-quinoline, chlororthophenyl phenol, or isothymol), followed by immersion in a zinc sulfate solution, they may be worn for a period of eight days without washing, or may be washed eight times before the fungicide has been washed out. *Reinfections of ringworm of the feet are thus avoided.* Method: The active agent (such as a 2-percent solution of sodium orthophenyl phenate) is used first, for 15 minutes. The "locking" agent (such as a 0.5 percent solution of zinc sulphate) is then used for 5 minutes. After each procedure the stockings should be allowed to drain, not wrung out. Trichophyton and staphylococcus do not grow on these stockings until the fungicide has been removed, by wear or washing.—S. S. GREENBAUM, M.D., in *Penn. Med. J.*, June, 1940.

Vitamin B Complex in Functional Intestinal Disorders

● Forty-four (44) patients who complained of various intestinal symptoms, but showed no organic lesions on laboratory and x-ray examination, were given a vitamin B complex preparation made from yeast, reenforced, in some cases, with nicotinic acid, riboflavin, or thiamin. About 60 percent of the complaints were relieved.—R. C. L. BATCHELOR, M.D., et al, in *Brit. M. J.*, June 15, 1940.

Meniere's Disease

● Two new methods of treatment for the sudden onset of vertigo and nystagmus (usually accompanied by tinnitus and impaired hearing) called Meniere's disease, are: (1) The low- or no-salt diet, with ammonium chloride, which prevents the accumulation of sodium chloride in the body; or (2) subcutaneous and intravenous injections of 1.9 mg. of histamine acid phosphate, dissolved in 250 cc. of physiologic saline solution, administered over a period of 1½ hours and repeated on 2 or 3 successive days.

The first method of treatment is based upon the theory that the labyrinth of the ear is waterlogged and that, by restriction of salt (and water, or by giving acid-producing salts), this edema is relieved. Both methods give good results.—E. E. N. & T. M., May, 1940.



THE DOCTOR'S STUDY

Thanks to books, the dead appear to me as though they still lived.—RICHARD DE BURY, in "Philobiblon" (1345).

Head Injuries

Gross and Ehrlich

THE DIAGNOSIS AND TREATMENT OF HEAD INJURIES. By SIDNEY W. GROSS, M.D., F.A.C.S., Attending Neurosurgeon, Beth Israel Hospital, etc.; and WILLIAM EHRLICH, M.D., Associate Attending Neurosurgeon, Newark Beth Israel Hospital. Introduction by PERCIVAL BAILEY, M.D., Ph.D., Professor of Neurology and Neurosurgery, University of Illinois, Chicago. 94 Illustrations. New York: Paul B. Hoeber, Inc., Medical Book Department of Harper and Brothers. 1940. Price, \$5.00.

THIS is a compact, informative guide, for the use of the general surgeon and clinician, in the diagnosis and treatment of the various injuries to the scalp, skull, and cranial contents. Direct, practical steps are outlined in the treatment of extradural and subdural hemorrhage, fractures of the skull with involvement of the sinuses and ear, gunshot wounds, suppurative following trauma, cranial nerve injuries, late convulsive seizures, and complications and sequelae of head injuries. A chapter on surgical technic is included.

Sufficient discussion is given on the methods of examination, pathology of head injuries, intracranial physiology, and applied anatomy of the head, so that the reader will have a solid foundation of knowledge as to the need for various measures, where they may be applied, and where they are contraindicated.

Internal Medicine

Yater

THE FUNDAMENTALS OF INTERNAL MEDICINE. By WALLACE MASON YATER, A.B., M.D., M.S. (in Med.), F.A.C.P., Professor of Medicine and Director of the Department of Medicine, Georgetown University School of Medicine; Physician-in-Chief, Georgetown University Hospital. First Edition, Revised. New York and London: D. Appleton-Century Company. 1940. Price, \$9.00.

THE author has faithfully carried out his plan of working out a text for the specialist in family practice and the student, that will present only the important points in the diagnosis and treatment of non-surgical diseases.

The work has been revised, up to and including 1940, in an adequate manner. Diagnostic measures are briefly but carefully considered. Peritoneoscopy apparently has not been included. The illustrations are excellent and well reproduced.

This is an ideal book for a quick review of a disease that is under consideration.

New Books

Any book reviewed in these columns will be procured for our readers if the order, addressed to CLINICAL MEDICINE, Waukegan, Ill., is accompanied by a check for the published price of the book.

Operative Surgery

Horsley and Bigger

OPERATIVE SURGERY. By J. SHELTON HORSLEY, M.D., LL.D., F.A.C.S., Attending Surgeon, St. Elizabeth's Hospital, Richmond, Virginia; and ISAAC A. BIGGER, M.D., Professor of Surgery, Medical College of Virginia, Surgeon-in-Chief, Medical College of Virginia Hospitals, Richmond, Virginia. Two Volumes. Fifth Edition. St. Louis: The C. V. Mosby Company. 1941. Price, \$18.00.

THIS two-volume set is beautifully bound and printed and is a practical book, in that the authors describe only their own technics and their actual working during the operation and afterward. This is especially true of the sections on intestinal resection, arterial suture, and thyroidectomy, and is a welcome change from those texts which describe every operation in a routine manner, as if every patient presented the same anatomic and pathologic changes and could be treated by the same 1-2-3 technic. The many illustrations are of the highest type.

Every type of operation that is routinely handled by the general surgeon, except pelvic surgery and cesarean section, is included, so these volumes are valuable, especially to less experienced surgeons.

Physician's Daily Record

Kersten

THE PHYSICIAN'S DAILY RECORD. 1041 Edition. Fort Dodge, Iowa: The Kersten Publishing Company. Price, \$5.00.

THIS is probably the most modern physician's record yet published. The volume is so bound that the pages lie flat at all times, and all portions of each page can be seen and written on readily, thus retaining the advantages of a loose-leaf binder without the disadvantage of possible loss of sheets.

There is a separate record form for every day of the year. Each sheet contains the date and day of the week, so that the most unreliable office girl or the most hurried physician will find it hard to make an error in dates, when recording charges or when looking them up. The sheets containing the monthly and yearly summaries are printed on a bright-blue paper, and furnish all the information needed for income tax reports. A new sheet furnishes space for recording of inoculations each month; more pages have been given for the obstetric waiting list. The book is so complete and efficiently planned that it and any type of ledger, are the only account books needed by any physician, regardless of the size or nature of his practice.

Rheumatic Fever

Wilson

RHEUMATIC FEVER; Studies of the Epidemiology, Manifestations, Diagnosis and Treatment of the Disease during the First Three Decades. By MAY G. WILSON, M.D., *The New York Hospital and Department of Pediatrics, Cornell University Medical College, New York City.* New York: The Commonwealth Fund, 1940. Price, \$4.50.

A COMPLETE monograph on rheumatic fever has long been needed. The author covers every phase of the problem: the cardiac factors; the tremendously important matter of differential diagnosis; various types of ambulatory and bed treatment; the prognosis and complications.

Complete directions for fluoroscopy and roentgenography of the heart, and the demonstrations of enlarged heart chambers in oblique views which were not shown on anteroposterior films, are given.

The book cannot be too highly recommended to the general practitioner, who sees most of these cases first, to the pediatrician, and to the internist. Because of the low price, this 585 page volume, amply illustrated with roentgenograms, clinical photographs, and sketches, should be widely utilized.

Digestive Disorders

Rosenthal

DISEASES OF THE DIGESTIVE SYSTEM: A Text-book for Students and Practitioners. By EUGENE ROSENTHAL, M.D., *Lecturer in the Medical Faculty, Royal Peter Pazmany University, Budapest, Hungary.* With a Preface by R. J. V. PULVERTART, M.D., *Reader in Pathology, University of London.* 235 Illustrations, including 104 in Color, and 16 Tables. St. Louis: The C. V. Mosby Company. Price, \$3.50.

THIS highly individual book represents the teaching methods of an instructor who believes in dramatizing and simplifying his subject so that it may easily be remembered.

Several hundred unique drawings and sketches make it possible to visualize digestive system physiology and pathology. They must be seen to be appreciated. The physician who remembers these illustrations will be a better clinician. Many points in physical diagnosis, including palpation of gallbladder and kidney, percussion of the kidney and spleen with the aid of the air filled colon, palpation of the liver, and others, are included. Because of the dogmatic nature of the text, one may not always know the reason why some procedure is carried out in the manner described, but it is to be regretted that more teachers are not able to vitalize their subjects in this manner.

Bacteriology

Ford

BACTERIOLOGY: XXII in the Clio Medica Series of Primers on the History of Medicine. By WILLIAM W. FORD, M.D., D.P.H., *Emeritus Professor of Bacteriology, School of Hygiene and Public Health, Johns Hopkins University.* New York and London: Paul B. Hoeber, Inc., Medical Book Department of Harper and Brothers, 1930. Price, \$2.50.

THE author has ingeniously and interestingly traced the chronologic history of bacteriology, from early observations and the discovery of bacteria by Leeuwenhoek, to the more recent developments. The little volume is bound, as are the 21 preceding Clio Medica Primers, in a brilliant red cover, and like them, is well printed.

Pathology

MacCallum

A TEXTBOOK OF PATHOLOGY. By W. G. MACCALLUM, M.D., *Professor of Pathology and Bacteriology, The Johns Hopkins University, Baltimore.* Seventh Edition, thoroughly revised. Philadelphia and London: W. B. Saunders Company, 1940. Price, \$10.00.

THE MacCallum text, long known to students as "the book that made pathology interesting," has been issued in a new edition. Again, emphasis has been laid upon relating cause to effect and pathologic changes to clinical

signs. The introductory chapters should be read by every clinician, so that he will give proper credit to the body's defenses, as well as to the chemical agent he happens to be using.

The illustrations, numbering almost 700, are of the best teaching type.

Clinical Methods

Hutchinson and Hunter

CLINICAL METHODS: A Guide to the Practical Study of Medicine. By SIR ROBERT HUTCHINSON, BART., M.D., LL.D., F.R.C.P., *Consulting Physician to the London Hospital for Sick Children, Great Ormond Street; and DONALD HUNTER, M.D., F.R.C.P., Physician to the London Hospital.* 19 Colored Plates, 8 Half-tone Plates, and 106 Figures. New York: Paul B. Hoeber, Inc., Medical Book Department of Harper and Brothers, 1940. Price, \$5.00.

THIS pocket-size volume discusses the various methods used in studying a patient and in arriving at a diagnosis. Details of technic and methods are given, so that the student and busy practitioner may quickly review the clinical methods used in investigating the alimentary canal and abdomen, circulatory system, blood, respiratory system, urine, skin, nervous system, eye, ear, nose and throat, bones and joints, children, pathologic fluids, and bacteria.

As physical and laboratory methods are both given, this manual is invaluable. Presenting so many facts in such a well correlated manner is a feat of medical writing.

Chemical Composition of Foods

McCance and Widdowson

THE CHEMICAL COMPOSITION OF FOODS. By R. A. McCANCE and E. M. WIDDOWSON, *Department of Medicine, University of Cambridge.* New York: The Chemical Publishing Company, Inc., 1940. Price, \$2.50.

THIS is a useful volume for those who wish to know the constituents of various foods—their mineral content, acid or base balance, protein, fat and carbohydrate content. Not only are standard dietary articles listed, but one may find many of the proprietary foods and cereals that nowadays make up so much of our diet; and dishes consisting of several foodstuffs are also considered.

The Cardiac Patient

Leaman

MANAGEMENT OF THE CARDIAC PATIENT. By WILLIAM G. LEAMAN, JR., M.D., F.A.C.P., *Assistant Professor of Medicine, Department of Cardiology, Woman's Medical College of Pennsylvania, Philadelphia.* etc. 255 Illustrations. Philadelphia, London, Montreal: J. B. Lippincott Company. Price, \$6.50.

THE author has done a service for the specialist in family practice, in grouping together all that is known of the diagnosis and treatment of heart disease. The heart changes under various conditions (pregnancy, surgery, cardiac emergencies, coronary thrombosis, thyroid disease) are well described. Through use of the case history method, typical patients' care is recounted as to symptoms, signs, diagnosis, and treatment.

Physician's Accounting System

DR. COLWELL'S DAILY LOG FOR PHYSICIANS FOR 1941. A Brief, Simple, Accurate, Financial Record for the Physician's Desk. Champaign, Ill.: The Colwell Publishing Company, 1940. Price, \$6.00.

FOR the past twelve years I have used Dr. Colwell's Daily Log and it has proved to be an efficient and accurate system. The daily business summary and expense sheet, along with the obstetric and surgical records, give the general practitioner a clear picture of what is being done. The personal account, inoculation, narcotic, and social security records combine with the annual summary forming a business picture which is gratifyingly complete.

J. E. F.

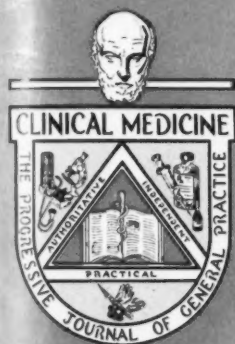
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